Hiram E. Fitzgerald, Kaija Puura,
Mark Tomlinson, Paul Campbell, Editors

INTERNATIONAL PERSPECTIVES ON CHILDREN AND MENTAL HEALTH

Volume 1 Development and Context

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INTERNATIONAL PERSPECTIVES ON CHILDREN AND MENTAL HEALTH

Volume 1

Development and Context

Hiram E. Fitzgerald, Kaija Puura,
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Child Psychology and Mental Health
Hiram E. Fitzgerald, Series Editor

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SERIES FOREWORD

The 20th century closed with a decade devoted to the study of brain structure, function, and development that, in parallel with studies of the human genome, has revealed the extraordinary plasticity of biobehavioral organization and development. The 21st century opened with a decade focusing on behavior, but the linkages between brain and behavior are as dynamic as the linkages between parents and children and between children and environment.

The Child Psychology and Mental Health series is designed to capture much of this dynamic interplay by advocating for strengthening the science of child development and linking that science to issues related to mental health, child care, parenting, and public policy.

The series consists of individual monographs or thematic volumes, each dealing with a subject that advances knowledge related to the interplay between normal developmental process and developmental psychopathology. The books are intended to reflect the diverse methodologies and content areas encompassed by an age period ranging from conception to late adolescence. Topics of contemporary interest include studies of socioemotional development, behavioral undercontrol, aggression, attachment disorders, substance abuse, and the role that culture and other contextual influences play in shaping developmental trajectories. Investigators involved with prospective longitudinal studies, large epidemiologic cross-sectional samples, or intensely followed clinical cases or those wishing to report a systematic sequence of connected experiments are invited to submit manuscripts. Investigators from all fields in social and behavioral sciences, neurobiological sciences, medical and clinical sciences, and education are invited to submit manuscripts with implications for child and adolescent mental health.

Hiram E. Fitzgerald
Series Editor

PREFACE

In 2002, Praeger Press launched a new series devoted to advancing understanding of the relationship between child psychology and mental health. The first volume focused on imaginative play in early childhood, and subsequent volumes have examined a wide range of research, policy, and practice issues influencing the mental health of children and adolescents. The collective force of the nine volumes published thus far has provided national stature for the Child Psychology and Mental Health series.

Although population diversity has been represented in past volumes, it has not been a central theme, and therefore past volumes do not provide systematic coverage of the broad issues confronting minority populations. A chapter on juvenile justice disparities among Latino youth, one on tribal boarding schools, and another on the historical impact of slavery on contemporary African American families or the legacy of internment of Japanese families during the Second World War does little justice to the rich set of issues affecting the mental health of children from America's increasingly diverse racioethnic population. Indeed, consensus population estimates indicate that by 2050, at least half of America's children will be members of groups that currently are defined as minorities. The American melting pot is being stirred up, guided by 21st-century recipes that are far more multicultural and inclusive than has been the case in past generations. Despite this unprecedented diversification, little is known about within- and between-group variation in life course pathways for mental health among minority children.

In providing justification for these volumes, I noted that professional and public documents increasingly draw attention to the pervasive problems affecting individual, family, and community development. It was not difficult to point out the extraordinary number of children with poor self-regulatory skills, poor school achievement, and family resources that place them at high risk for achieving successful developmental outcomes. Nor does one have to search hard to find documentation of the long-term effects of child abuse and neglect, gang violence, substance abuse, aggression, poverty, and the dissolution of a sense of community and civic responsibility. All are factors that have fueled a crisis in children's mental health in the United States and throughout the world. In many instances, these issues disproportionately involve children and families of color, exacerbated because of poverty, institutional racism, and a deep sense of anomie. Conversely, in many other families of color, children succeed, families are functioning well, and individual hopes and aspirations are achieved. It is far less common to read about effective parenting, resilience, and life course successes among minority families. Although single volumes have addressed many of these issues, including volumes written by many of the authors attached to the current series, there has been no comprehensive, focused attention directed to articulation of the core issues of child development and mental health within the major minority groups in the United States or internationally.

The time frame from conception to postnatal age five years is vital for all children's development. It is during these years that children develop the neurobiological and social structures that will facilitate brain development and its expression in social-emotional control, self-regulation, literacy and achievement skills, social fitness, health, and well-being. However, while the early years are extraordinarily important in the organization of biopsychosocial regulation, a dynamic and contextual approach to life span development provides ample evidence that there are critical developmental transitions that elementary children, youth, adolescents, and emergent adults must negotiate if they are to construct successful life course pathways. What also is clear is that public access to state-of-the-art knowledge and recommendations about future scientific and public policy practices is limited by a lack of concentrated information about developmental issues facing children and families whose skin color, culture, and racial identities are different from those of children in the dominant population.

This set of nine volumes targets the educated public, individuals who not only are responsible for public policy decisions but also for raising America's children, voting for policy makers, and making decisions about policy issues that may or may not positively affect all children. Two volumes each will address child development and mental health issues in African American children, Latino children, Asian and Pacific Islander children, and children from around the world. One volume covers the same content for American Indian and Alaska Native children. The collective nine volumes capture the state of the art in knowledge known and knowledge to know and examine social and public policies that impede or enhance positive mental health outcomes among an increasingly significant portion of America's children as well as children around the world.

This project would not have been possible without the goodwill and hard work of a dedicated set of editors, uniquely selected for each two-volume set. Their efforts, combined with commitments from an extraordinary group of social, behavioral, and life science scholars, enabled completion within our projected two-year project period. I cannot express deeply enough my thanks to authors for enduring countless e-mail deadline announcements, for their quick responses to tracked-change manuscripts, and for their good spirits throughout the editorial process. Of course, behind the scenes are the individuals who manage the production process. Prior to enrolling in graduate school, Lisa Devereaux provided initial assistance for tracking the flow of editor and author contacts. For most of the duration of the project, Julie Crowgey has served as the project manager, coordinating editors and authors and the publisher to move the project toward its completion. She truly has been the glue that has held everything together. Additional thanks to Adina Huda and Gaukhar Nurseitova for their always perfect and prompt technical assistance with graphics. Finally, I must acknowledge Deborah Carvalko, Praeger editor, who conceived of the idea for the Praeger series and recruited my involvement. It has been a pleasure working with Deborah to produce all the volumes in the Praeger series drawing attention to the interface between child psychology and mental health.

Hiram E. Fitzgerald

Chapter 1

CROOKED TREES GROWING STRAIGHT: THE EXPERIENCES OF BOYS TRANSITIONING OFF THE STREETS OF LA PAZ, BOLIVIA

Kristin Huang and Catherine Ayoub

> My father always said I couldn't do anything, that I was a bum, that I was just some street kid. He told me I was never going to study, that I'm just stupid. I wanted to show him that it's not like that. That's why I am studying really hard and trying to do my best in every aspect of my life. . . . You know, the people always say "crooked trees never grow straight." I want to show them that's not true, that people can straighten out, they can get back on the right track and do what they need to do.
>
> —Damian, age 14

The presence of children on the streets is a worldwide phenomenon. Estimates predict there to be up to 170 million street children around the world, with 40 million living in Latin America (United Nations, 1986). Those numbers are increasing daily, primarily due to conflicts and displacement, growing poverty and urban migration, and the spread of HIV (Scanlon, Tomkins, Lynch, & Scanlon, 1998). The problem has reached such proportions that some members of Congress are calling it not just a humanitarian crisis but a security crisis, recommending increased funding to attend to the matter.

Bolivia, the poorest country in South America, is home to its own growing population of street children (Bond, 1993). Approximately 2,500 children are believed to be living on the streets of the three largest cities: La Paz, Cochabamba, and Santa Cruz (UNICEF-Bolivia, 1994). The majority of those children are adolescent boys between 11 and 18 years old (Domic & Ardaya, 1991; UNICEF-Bolivia, 1994). The differences between these children and the many thousands more who are on the streets during the day, but who return home to sleep at night, are slim. Thus the scope of the problem reaches far beyond those sleeping on the streets today and extends to the larger numbers of children considered at risk of sleeping on the streets tomorrow (Scanlon et al., 1998).

The dangers of street life are well documented. Living on the streets puts children at great physical and emotional risk, and the longer children live on the streets, the less likely it is that they will be able to secure a healthy future (Hecht, 1998). There exist no longitudinal studies that offer insight into what happens to children living on the streets in the long run, but common sense indicates that their futures are bleak, if not tragic. Some commit suicide, some are killed as a result of street violence, and others die in tragic accidents related to their vulnerability on the streets. These lost children, along with the others who now roam the streets aimlessly, drooling and unable to talk as a result of their years of constant drug use, make intervention a moral imperative. Though there are various cultural differences among the global population of street children, the lives of those in developing countries have proven to be quite similar in nature (Lalor, 1999; Williams, 1993). Street children in Bolivia, like street children in many other countries, face multiple risks that threaten their development and their lives in general. Lack of adequate shelter, nutrition, education, health care, and loving caretakers puts them at great risk for any number of medical problems, mental illnesses, and social difficulties. The prevalence of drug abuse and unsafe sexual practices among the street children only compounds these risks (Inciardi & Surratt, 1998; Molnar, Shade, Kral, Booth, & Watters, 1998). Preliminary research in La Paz indicates that 89% of street children abuse substances, predominantly inhalants, on a regular basis (Huang, 1998). Studies have also reported that children on the streets become sexually active at a young age, many as young as 10 years old, with few using protection regularly (Anarfi, 1997). As a result, rates of sexually transmitted diseases, unwanted pregnancies, and unsafe abortions are high (Wright, Kaminsky, & Wittig, 1993).

Victimization and exploitation are also part of the daily reality of street life. Studies have shown that most street children are subjected to physical abuse on a regular basis, and many have experienced different forms of sexual abuse as well (Lalor, 1999). Often street children are victimized by other street children, but police are also common perpetrators of physical and sexual violence. It is not unusual for police in Bolivia to round up groups of children arbitrarily, take them to rehabilitation centers, and then beat and rape them (Bond, 1993). In addition, the majority of citizens tend to view street children as nuisances and as little criminals, blaming them for rising crime rates (Ferguson, McIntyre, & Kaminsky, 1993) and sometimes calling for their extermination (Lalor, 1999).

Despite such dangers, children are often reluctant to leave the streets. Practitioners around the world report that helping children transition off the streets and find stability in a residential setting is excruciatingly difficult (Veeran, 2004). Some researchers speculate that drug addiction, lack of trust in adults, and the desire for freedom and independence may be some of the main obstacles preventing children from leaving the streets (Wittig, Wright, & Kaminsky, 1997). Others claim that street children are so focused on the present reality and the need to survive that their ability to consider the long-term risks and consequences of their actions is substantially compromised. These researchers suggest that even when children are able to use such propositional reasoning, their negative outlook on the future affects their ability to care about what may happen as a result of their current decisions (Diversi, Moraes Filho, & Morelli, 1999).

Although the literature on street children offers a compelling call to action as it documents a tragic and worsening reality, it provides limited direction for practitioners. Though the existence of street children and the dangers of street life are well documented, there is a paucity of research related to intervention with this population (Dybicz, 2005) and nothing that specifically addresses how children successfully transition off the streets. In recent years, researchers of runaway and homeless youth in North America began exploring the differences between those who successfully reintegrate into mainstream life and those who remain homeless. Though there are distinct differences between runaway youth in developed countries and street children in developing nations, the specific construct of resilience that emerged from these researchers' efforts provides a useful point of departure for this study.

As Williams, Lindsey, Kurtz, and Jarvis (2001) note, the predominant frameworks in resilience research "do not apply neatly to runaway and homeless youth because such youth frequently are unable or unwilling to alter their exposure to serious risks or successfully engage with caring adults" (p. 235). Furthermore, homeless youth do demonstrate marked resilience as they adapt to life on the streets, creatively utilizing various resources, building supportive social networks, developing their problem-solving skills, and honing an ability to discern who is trustworthy (Bender, Thompson, McManus, Lantry, & Flynn, 2007; Kidd & Davidson, 2007). To improve intervention efforts, therefore, it is necessary to distinguish the resilience of successfully reintegrated runaway youth from general concepts of resilience. The small body of research dedicated to this specific task separates resilience into three central categories: personal attributes, critical incidents, and resources.

Several personal attributes distinguish youth who have been able to transition off the streets. Determination is a primary attribute that appears throughout the literature (Kidd & Davidson, 2007; Lindsey, Kurtz, Jarvis, Williams, & Nackerud, 2000). Youth who have successfully left the streets frequently demonstrate tenacity and persistence and possess what Williams et al. (2001, p. 242) call that "I'll show you!" attitude. This attribute is often accompanied by pride in overcoming adversity (Kidd & Davidson, 2007; Williams et al., 2001). Those youth who are able to derive a sense of personal value or self-esteem from having survived adverse circumstances are more likely to succeed in leaving the streets, believing they are capable of something better (Kidd & Davidson, 2007; Lindsey et al., 2000).

Spirituality is another primary attribute of resilient runaway youth. The ability to find meaning and purpose in life experiences as well as draw on a higher power for strength and comfort seems to be critical for many youth making the transition off the streets (Bender et al., 2007; Williams et al., 2001). This seems particularly relevant in light of Rew, Taylor-Seehafer, Thomas, and Yockey's (2001) study, which found that hopelessness and connectedness explained 50% of the variance in resilience in homeless adolescents.

Finally, resilient runaway youth demonstrate an ability to learn from difficult experiences, developing new attitudes and behaviors that facilitate the transition off the streets (Lindsey et al., 2000). Critical among those new attitudes is the readiness to accept help (Bender et al., 2007; Williams et al., 2001) that often follows critical incidents (MacKnee & Mervyn, 2002).

Though the path off the streets is different for each youth, critical incidents can play a key role in propelling that path forward. For some youth, the transition off the streets is more sudden, often following a wake-up call experience, whereas for others, it is a more gradual process, "characterized by cycles of progress and regress" (Lindsey et al., 2000, p. 138). In a 2002 study, MacKnee and Mervyn identified 19 different critical incidents that facilitated homeless people's transition off the streets. They organized the incidents across five central themes that included (1) establishing supportive relationships, (2) discovering some measure of self-esteem, (3) accepting personal responsibilities, (4) accomplishing mainstream lifestyle goals, and (5) changing perceptions. Significant events that have been shown to activate these themes include reconnecting with supportive family members, completing a degree program, having a near-death experience or losing someone close, having the opportunity to help someone else, having responsibility for a pet, and feeling like you have hit bottom (Bender et al., 2007; Kurtz, Lindsey, Jarvis, & Nackerud, 2000; Lindsey et al., 2000; MacKnee & Mervyn, 2002; Williams et al., 2001).

Resources in conjunction with critical incidents facilitate a transition off the streets. Since critical incidents can frequently lead to an increased readiness to accept help (MacKnee & Mervyn, 2002; Williams et al., 2001), the presence of key resources during or immediately after significant incidents is advantageous (Kurtz et al., 2000). Key resources in helping youth transition off the streets are primarily human resources (Bender et al., 2007; Kurtz et al., 2000; Lindsey et al., 2000). Family, friends, and professional helpers represent the main human resources that provide assistance to youth on the streets, and they have the potential both to help and to hinder resilience (Kidd & Davidson, 2007; Kurtz et al., 2000). According to street youth, the types of help that are most important are caring, trustworthiness, setting boundaries and holding youth accountable, concrete assistance, and professional counseling (Kurtz et al., 2000). Help that is long-term and consistent (Williams et al., 2001), flexible and person centered, and that can productively engage family members and friends in supportive roles (Kurtz et al., 2000) is thought to best promote resilience and help youth make the transition off the streets.

Social scientists and practitioners agree that more research is needed to illuminate the experiences of street children (Hutz & Koller, 1999). Earls and Carlson (1999) discuss the need for "nuanced research" and advocate for the use of qualitative methods to "provide complex and intimate depictions of the relationships and difficulties of the children's experience" (p. 78). In response to this call, our study aims to provide a starting point for practice-focused research by exploring the journeys of boys who were able to leave the streets successfully. Its goals are to capture the lived experiences of these boys as they moved onto and off of the streets and to develop an understanding of what the boys believe enabled their transition success. The questions guiding this project are as follows:

1. How do the boys describe their lives prior to moving to the streets?
2. How do they describe the process of transitioning onto the streets?
3. How did they view their lives on the streets?
4. How do they describe the process of leaving the streets?
5. What did the process of becoming stabilized in a residential program involve?
6. What do they believe enabled their transition success?

ETHNOGRAPHIC APPROACHES TO UNDERSTANDING BOLIVIAN BOYS ON THE STREET

Because the population we wished to study comprises extremely vulnerable children, and because access to that population is complicated, sample choices were made in an effort to minimize risk and maximize resources. Consequently, we selected 10 children currently living in the Esperanza permanent homes; the names of the homes have been changed to protect the identities of participants. While using such a sample of convenience has obvious drawbacks, it provided a reasonable and feasible way to proceed.

The 10 children living in the Esperanza permanent homes are boys between the ages of 13 and 17 who have successfully transitioned off the streets. Boys are considered "successfully transitioned" after demonstrating a minimum of nine months of stability in a transition home, characterized by no running away, no drug use, and a willingness and ability to participate in all program activities. All 10 boys graduated from the Esperanza transition program within the past four years, spent a minimum of one year on the streets prior to coming into the program, and experienced some degree of abuse and neglect in their original families. According to local reconnaissance, these boys are representative of the larger population of boys living on the streets of La Paz (UNICEF-Bolivia, 1994).

The boys are all residents in permanent homes run by the Esperanza Program, a U.S.-based nonprofit organization that supports and runs programs to address the needs of street children in La Paz, Bolivia. The Esperanza Program offers three different types of direct-service programs that are interconnected and successive. The first is the street outreach program, through which outreach workers identify and build relationships with children living on the streets, with the primary objective of helping them decide to enter the second program: the transition home. Though street outreach activities are open to anyone, the program currently only targets boys between the ages of 6 and 13 for entry into its residential program. Street outreach services include basic medical care and health education, regular social and recreational activities, advocacy, and friendly support visits to check in on children.

All the participants came into the transition home through the street outreach program. The transition home offers a highly structured program that includes psychoeducational groups, remedial education, and various extracurricular activities, all focused on helping the boys adapt to life off the streets. Once boys reach a level of stability, typically 9–15 months later, they are able to move to a permanent home. Esperanza's permanent homes utilize a family model in which 10 boys and a set of house parents live together in a house. Boys continue to receive various support services, but they attend public school and enjoy more freedoms as they grow in their stability. Boys remain in the permanent homes until adulthood; as adults, they are encouraged to return to the home and to consider the members of the home their families. The program has no fixed age limit; rather it plans to base decisions regarding the transition to independence on the individual needs of each boy.

The general structure of the Esperanza residential program is one that is used by multiple programs in Bolivia. Many residential programs engage in street outreach activities to form initial relationships with children, run transition houses for children first coming off the streets, and then move children into more permanent living situations once they have demonstrated stability. Therefore an examination of how children who progressed through this type of residential program experienced the transition process bears direct implications for a large community of programs. Since residential programs are the primary vehicle through which children in La Paz achieve stability off the streets, it makes sense to examine children's transition experiences in a context that includes residential living. This approach also allows us to offer suggestions to enhance success of residential programs for homeless youth.

ANALYSIS OF NARRATIVES FROM BOYS OF THE STREET

In keeping with the approach recommended by Earls and Carlson (1999), qualitative methods were selected for use in this study in order to respond to research questions that address process, context, and meaning. Since such an approach is more likely to "offer insight, enhance understanding, and provide a meaningful guide to action," it was considered appropriate, given the research goals (Strauss & Corbin, 1998, p. 12). The primary methods used to collect data were individual interviews and focus groups. All interviews and focus groups were conducted by one researcher in Spanish, tape-recorded, and then transcribed verbatim for analysis.

Whereas in-depth individual interviews explored the perspectives and experiences of each boy independently, focus groups provided the additional benefit of stimulating the participants to "think beyond their own private thoughts and to articulate their opinions" (Kleiber, 2004, p. 91). The authors anticipated that the adolescent boys might have difficulty elaborating on their thoughts and reflecting deeply on the questions posed in a one-on-one session without significant prompting from the facilitator. Focus groups were therefore implemented as an additional data collection method because of their distinct methodological advantages for research with children and adolescents, in particular, since they tend to facilitate participation and more clearly elicit perceptions and beliefs (Vaughn, Schumm, & Sinagub, 1996). Using individual interviews and focus groups together allowed for a more comprehensive sense of the boys' transition experiences and provided multiple opportunities to triangulate information.

Each boy participated in an initial focus group and two individual, semi-structured interviews on separate occasions during a two-week period. Each interview lasted between 35 and 60 minutes. The first interview focused on their life experiences from birth through their time on the streets, whereas the second focused on their experiences from the streets to the present. Though the interviewer had an interview protocol as a guide, participants were encouraged simply to tell their life stories.

The follow-up focus groups were conducted a few months after the interviews and were led like brainstorming sessions. Participants were asked to make meaning of several scenarios and respond to questions, not personally, but as if they were speaking for the general population of boys in a similar position to theirs. In general, reflection on meaning did not come easily to participants, and a certain amount of probing was necessary to solicit deeper personal analysis. In the end, the data collected through both individual interviews and focus groups converged on similar themes that reflected the opinions of the boys.

A grounded theory approach to analysis was taken in order to allow the data to drive theory development (Strauss & Corbin, 1998). Preconceived lists of concepts and themes were eschewed as much as possible in favor of an open coding process (Strauss & Corbin, 1998). The software program NVivo was used to store, organize and analyze data.

After each interview and focus group was transcribed, each transcript was coded twice. The first coding pass attempted to establish a general chronology of events, as well as to document background information. This supported the construction of a general framework of each child's transition process as it related to time and place and significant event. After reviewing each case for these details, we used data matrices (Miles & Huberman, 1994) to organize initial findings and compare the general transition process across cases. Findings continuously informed the data collection process and analytic memos were written to document emerging theories and their influence on any changes in methods.

In the second analysis, more abstract concepts were examined. Both categorizing and contextualizing strategies were used to organize the data and build theory. Emerging themes and patterns were identified, using "in vivo" codes as appropriate to preserve the cultural context of the data. This was followed by the categorization of data within and across each case according to prominent themes related to the research questions. All data was reviewed periodically in light of developing theories, following the grounded theory approach.

DESCRIPTION OF THE BOYS AND THEIR LIFE TRAJECTORIES

The 10 adolescent boys ranged in age from 13 to 17 and were homeless for between one and five years prior to entering the program. The boys' residency in Esperanza's permanent homes meant that they had successfully transitioned off of the streets and achieved stability in a transition home, earning the move to a permanent residential facility. Half of the boys lived in Hogar Illimani (Illimani Home) and the other half lived in Hogar Sajama (Sajama Home). While the boys of Hogar Illimani were generally older and had been off the streets longer, all of the boys had been off the streets for a minimum of about two years at the time of the interviews (see Table 1.1).

While it was difficult for the boys to provide precise information with regard to time and place, it was possible to get a general sense of their paths from their original homes to their current homes. All of the boys reported spending increasing amounts of time on the streets from the time they were very young. All but one began sleeping on the streets when they were between seven and nine years old. The length of time between when participants first left home and when they entered the Esperanza Program ranged from one to five years, although it is unclear precisely what amount of this time was spent living on the streets, since eight participants spent time in other institutions and several reported movement to and from their family homes. This movement back and forth, however, tended to be during the beginning of the boys' time on the streets and diminished over time.

On the streets, the boys slept in various places and roamed about during waking hours looking for money. Some lived in an abandoned factory building with a group of boys, others lived in makeshift shelters alongside the sewer, and a few slept in trees. All earned money through stealing, though some also begged or had jobs. Working as a *voceador*, shouting destinations out of the window of busses, was the most common job held

Table 1.1
Participant profiles

	Martin	*Lucho*	*Franklin*	*Diego*	*Damian*	*Florentino*	*Adrian*	*Alex*	*Tito*	*Cristian*
DOB	10-8-92	9-12-89	11-4-89	1-2-90	8-11-92	9-5-92	3-31-93	3-5-91	12-23-93	12-6-89
Home	Sajama	Illimani	Illimani	Illimani	Illimani	Sajama	Sajama	Sajama	Sajama	Illimani
Age (at time of interview)	14	17	17	17	14	14	14	15	13	17
Age when entered home	12	10	12	13	10	12	12	13	11	12
Length of time off streets	1 year 11 months	6 years 7 months	5 years 4 months	4 years 7 months	4 years 2 months	2 years 3 months	1 year 10 months	1 year 11 months	2 years 2 months	5 years 7 months
Age first living on streets	7	7	11	9	7	9	7	9	9	9
Length of time homeless[a]	5 years	2–3 years	1 year	3 years	3 years	3 years	5 years	4 years	2 years	2 years
Experience in other institutions	Yes	Yes	No	?	Yes	Yes	Yes	Yes	Yes	Yes
Drug Use	Tried it	None	None	?	Tried it	Habitual user	Habitual user	Habitual user	Habitual user	Tried it
School attendance while on streets	Dropped out	Dropped out	Dropped out	Dropped out	Stayed in school	Dropped out	Dropped out	Dropped out	Dropped out	Dropped out
How connected to program	Through street outreach	Through street outreach	Through street outreach	Through street outreach	Through street outreach	Through street outreach	Through street outreach	Through street outreach	Through street outreach	Through street outreach

[a] This number reflects the length of time between when participants started living on the streets and when they entered their current residential programs. During this time, most participants had stints in other institutions, and in some cases, participants returned home for brief periods.

by the boys, though some also worked washing dishes or preparing foods during street festivals. Most of the boys had experience inhaling paint thinner, though only four admitted to being habitual users. All but one of the participants dropped out of school when they left home and did not receive formal schooling again until they entered the permanent homes of Esperanza.

All of the boys became connected with the Esperanza Program through the program's street outreach workers. Some participated in outreach activities (soccer games, special holiday events, medical care) and built relationships with staff members over time, while others met staff members during times when they made street visits. One boy came to know staff members through a hospital referral when he was receiving inpatient care for a street-related health problem.

FROM HOME TO THE STREET: FAMILY BACKGROUNDS

All 10 participants were born and raised in the greater La Paz area. While some spent time living in the country and jungle regions just outside of the metropolitan area, they all were raised primarily in the city of La Paz or in the slum suburb of El Alto. All participants were of indigenous or mixed descent and came from impoverished backgrounds. Their homes were simple and sometimes quite rustic. As Adrian described, "My family had few resources, just like any other. We had a bed, a stove, that's it." Some referred to their homes as "a room," others talked about needing to fetch water. Damian described his first home saying, "There wasn't water, there wasn't light. We had to use candles and for water we had to go to the plaza . . . and bring it all the way up the hill." Despite the humble nature of his home, Tito said, "To me it was nice." All of the boys' families struggled to make ends meet. Their caregivers found employment mainly in service positions, hard labor, or selling food on the streets; periods of unemployment were not uncommon.

Participants came from different family constellations (see Table 1.2). Some had large families with multiple half siblings, others had smaller families with fewer children, and two were raised by relatives surrounded by various cousins. Only three boys had relationships with their fathers, and six were raised primarily by single women. Three of the boys lost their mothers at an early age; two were subsequently raised by their fathers and the other was raised by his grandmother.

Lucho never knew either of his parents and was raised by an aunt. Martin didn't know who his real family was, but lived with a few different

Table 1.2
Family backgrounds

	Martin	*Lucho*	*Franklin*	*Diego*	*Damian*	*Florentino*	*Adrian*	*Alex*	*Tito*	*Cristian*
Primary caregiver(s)	Unclear	Aunt	Mother, then father and stepmother	Both parents, then father	Both parents	Mother, grandparents	Mother	Mother	Both parents, then mother	Grandmother
Other children in the family	Unclear	Various cousins	Younger brother, half brothers	Older brother, various older half siblings	Older twin siblings who died, younger sisters	Older sisters	Various half siblings	Various half siblings	Older sister	Various cousins
Caregiver employment	Unclear	Washing clothes	Caretaker, masonry	Mining, carpentry, washing clothes, selling food	Odd jobs, selling food on street	Made and sold cheese	Selling candy on street	Sweeping streets	Secretarial work (?), building roads	Looked for work on the street
Physical abuse	Yes	Yes	None reported	Yes	Yes	Yes	Yes	None reported[a]	Yes	Yes
Neglect[b]	Yes	Yes	Yes	Yes	Yes	None reported	None reported	None reported	None reported	None reported
Domestic violence	Yes	None reported	Yes	Yes	Yes	None reported	None reported	None reported	Yes	None reported
Abandonment or loss	Unclear who real family is	Both parents died	Mother murdered when he was 7 or 8	Mother died of unknown illness/ injury	Twin siblings died of illness	Father never present	Father never present	Father never present	Father left when he was around 3 or 4	Mother died giving birth to younger sibling (who also died), father left

[a] Alex reported extreme forms of physical abuse inflicted on his older siblings but never reported experiencing physical abuse himself.

[b] Neglect is only indicated in cases where the participant reported feeling either emotionally or physically neglected.

substitute families and their extended relatives through what seemed to be informal arrangements. Damian was the only participant who had a relationship with both parents at the time he left home, though they were separated at the time. Despite the differences in makeup, all the families could be described as broken. Whether through abandonment, loss, or divorce, all of the families were torn apart. Those that started out intact experienced domestic violence and ultimately, separation.

LIFE WITH THEIR FAMILIES OF ORIGIN

Words like "fine," "OK," and "good," were the first to come up when most participants began describing life in their original homes. However, the details that followed these initial adjectives were predominantly negative. Physical abuse, neglect, abandonment, loss, and domestic violence were key themes that came out of the boys' narratives of their prestreet years. Though not all of the boys experienced all of those kinds of traumas, most experienced more than one and nearly all experienced physical abuse and some form of loss or abandonment.

Though Martin was the only boy to speak of physical neglect, emotional neglect was discussed by several of the boys. Damian described neglect as feeling "disappointed" and "unloved." Diego, who lived with his father after his mother's death, described a lack of positive attention. "[My father] would just come home saying, 'I want something to eat.' I knew how to cook so I would cook for him. But I don't know, I just felt like I didn't have any kind of support in school, all of that. He didn't have any kind of discipline." Diego resented the fact that his father did not notice him and would just use him as a cook. He yearned for someone to give him boundaries, to reign in his misbehavior and make sure he was going to school. Instead, his father hardly noticed when Diego started skipping school, and when he did find out, he did not do anything about it.

Lack of involvement and supervision was not uncommon. Caregivers were often gone for long periods of time working. Sometimes, like in Franklin's case, a caregiver would travel to another city for work, leaving the children home alone and unattended for days or weeks at a time. More often caregivers would leave children alone all day and into the evening while they worked or tried to find work. It was easy, then, to run to the streets and there was great incentive to do so.

SCHOOL EXPERIENCES

All of the boys attended public schools in La Paz or in the suburb of El Alto prior to living on the street. State-run schools (*colegios fiscales*) offer three sessions of classes each day, so boys attended school either in the morning, the afternoon or the evening for about three to four hours a day. All but one of the boys described school in neutral or negative terms. Adrian had nothing negative to say about his school experience but dropped out after the third grade. Cristian said school was "fine" but that he did not really have any friends. Diego had a similar experience and frequently chose to spend time on the streets in lieu of going to school. Franklin had a distinctly negative school experience, describing it as "terrible! There were these bullies and this one guy always bothered me and wanted to fight with me. I didn't want to go back there because there were always problems, fights, all of that."

Damian was the only boy who talked about a positive school experience and was the only 1 of the 10 not to drop out of school during the time he was on the streets. Damian's relationship with a particular teacher had a profound effect on his commitment to education. When Damian's family situation deteriorated and he left home for the streets, he continued attending school and made sure he was enrolled each year. Bolivian schools require students to have a *libreta*, a formal document that verifies their school record, in order to enroll and attend school each year. While on the streets, Damian carried his *libreta* in his backpack wherever he went and took great care not to lose it. He said that he learned in school that studying was the way to "a happy life," so he was committed to graduating. During the time of his interview, he was on track to finish high school at 17, a fact he readily shared.

RUNNING FROM HOME TO THE STREETS

The transition onto the streets was, in most cases, the result of a combination of factors. Some of those factors, like abuse, neglect and domestic violence pushed participants out of their homes and onto the streets. Other factors, like arcades, opportunities to socialize with other kids, and money-making opportunities, were persistent temptations that pulled them onto the streets. In general, whether participants were primarily running *from* their homes or running *to* the streets, the street ultimately was deemed a better alternative to their homes.

For a few participants, the move to the streets was more sudden and definitive. Cristian, after experiencing a harsh beating from his grandfather that left a scar, ran away and never looked back. "I was so furious I just left," he explained, and out of fear he never returned. Lucho, who was spending more and more time on the streets, returned home late one night and was punished by his aunt. He spent a month confined to his room and finally decided he had had enough and left. When he heard his aunt was looking for him, he took care to hide. “I was afraid she would punish me, or that I would be left alone. I never wanted to be like that again,” he commented. Though Tito was accustomed to spending long days and evenings on the streets, he also left home abruptly. Like Cristian, Tito claimed it was an abusive incident that precipitated his departure. For most participants, however, the move to the streets was more gradual. A growing discontentment in their homes led to more and more time on the streets during the day, followed by stints of time staying out all night or sleeping in other places.

THE MEANING OF STREET LIFE

For all of the boys, living on the streets was a preferential option over staying in their homes. Many of the boys saw their lives on the streets as “free” and without hassles. Florentino did not see a big distinction between his home life and his street life. He explained, “It was practically like living in my house. When I lived at home, I could go wherever but I had to ask permission. On the streets, I went where I wanted when I wanted.”

Though freedom was a ubiquitous theme throughout the boys’ stories of their lives on the streets, themes of shame and sadness were also present. Several boys talked about the negative ways in which they were viewed by others. They often felt embarrassed by their appearance and by the fact that they were homeless. According to Diego, “People looked at you bad. I didn’t like for people to see me in the streets.” Martin said living on the streets meant he “didn’t exist in the world, because people didn’t see me as a good kid. They just saw me as a street kid who robbed and did bad things.” Like Martin, Tito disliked people’s perception of him as bad. “No one treats you well,” he said, “They see you coming and they get scared, thinking you’re gonna do something to them.” Many boys felt similarly misunderstood and talked about how others saw them as worthless.

Most of the boys expressed negative self-perceptions when discussing their time on the streets and were aware, at least on some level, that street life had a down side. Tito said, “I was nothing, I was just a bum.” Martin was aware that living on the streets had negative implications for his future, but he struggled with *vicios* (vices). He explained, “I knew [living on the streets] meant I wasn’t going to be able to do anything. . . . But the streets were always chasing me.” This kind of awareness was not claimed by all of the boys. Adrian admitted he never thought about the significance of living in the streets. “I just wanted to be the way I was.”

Cristian explained that “when you are on the streets you forget about everything. You forget what day it is because all the days are the same,” admitting that he, too, did not give the consequences of street life much thought. Damian, however, said it was hard not to be aware of the dangers of street life. “I knew that it was ruining me. Because I knew several kids who were just totally messed up. You could see it.”

TRANSITIONING: DECIDING TO LEAVE THE STREETS

The first part of the boys’ transition experiences involved making the decision to leave the streets. There were three main reasons the boys gave for making this decision: real and present dangers, wanting to change, and nothing to lose. Like with their transitions onto the streets, both push and pull factors contributed to the boys’ decision making.

For some of the boys, dangers and threats on the streets pushed them to decide to leave. In Cristian’s case, that threat was an older street boy named Jaime, who made Cristian his “slave” and threatened his life. Cristian saw an opportunity to enter a residential program as a way to get away from Jaime and avoid the violence he was sure to inflict. For other boys, fear of police brutality was a motivating force. Thus for these boys, deciding to leave the streets was about self-protection and escape from danger.

For several other boys, deciding to leave the streets was about wanting to change their lives. They were drawn off of the streets by the promise of something better. Adrian feared what he would become if he stayed on the streets. “I was afraid I would be Mr. Nobody! I was thinking I would just be like some bum, so I was thinking I have to study and become someone in life.” To him, entering a home was an opportunity to become educated and find a real identity. Alex started thinking about changing his life after a visit from his mother. Alex was motivated by both his mother’s emotional disappointment and a feeling that he was losing himself to the streets. He perceived a distinct point of no return on the streets; he wanted to change his life before it was too late.

Damian knew that leaving the streets was the only way he could change his life. According to him, “On the streets, there are different choices or paths, let’s say, and the majority of them lead to throwing your life away. There is only one that doesn’t and for me that is leaving the streets, abstaining, changing.” During his time on the streets, he had a nagging desire to change his life. “I don’t know how to say it,” he explained, “but it was like something ticking inside of me, telling me that I’m not that kind of person, that I can get out of all this." His decision to change his life by entering a home was influenced by a strong desire to demonstrate that he could "be better."

For a few of the boys, deciding to leave the streets and enter a home was neither about escaping dangers nor making life changes. When the opportunity came along to go with street outreach workers to the Esperanza Program's transition home, they figured they would give it a try because they had nothing to lose. It was only after leaving the streets and entering Esperanza's transition home that Diego and the other boys with nothing to lose made more conscious decisions to truly leave street life.

TRANSITIONING: COMING OFF THE STREETS

From the perspective of the boys, transition off the streets was primarily about changing their lives. This section documents how they characterized the changes that occurred during the process of becoming stabilized in a permanent home. The changes the boys described were personal, internal changes. The examples they offered could be divided into five main categories: behavioral, emotional/relational, spiritual, cognitive, and identity.

For all the boys, changes in their behavior were a big part of their transition process. Leaving the streets and entering a home required them to give up certain behaviors and adopt new ones that were less familiar. For several of the boys, stealing and inhaling paint thinner were intense addictions. Giving up those *vicios* required no small amount of effort. The boys were unable to describe what it was like to overcome those addictions, but they counted their success in doing so among their biggest achievements. Adrian said he knew he had successfully transitioned because "I don't think about drugs anymore. I don't think about stealing."

Learning to treat others with respect was a change many boys considered a big part of their transition process. Tito described himself before he entered the transition home as "a punk." "I didn't respect other people," he said, "but I've been improving." One of the main ways in which Alex changed, he said, is that "I don't swear much anymore or say rude things. . . . Like I don't want to say those words, like fu . . . or sh . . . right? Because when I started school again, I didn't talk like that anymore and it felt different." Talking with respect made him feel like a different person, and the difference felt good.

A few boys discussed powerful emotional changes that took place during their transition process that also helped them develop better relationships with others. Franklin described himself prior to entering the Esperanza homes as "a loner, very closed off." He struggled to relate to others and had mostly superficial relationships as a result. He cited "changing in my ability to socialize with others" as one of the biggest changes he experienced in transitioning off of the streets, crediting staff members with helping him become "more open." Franklin also talked about a second change, learning to manage his emotions. Lucho talked about learning how to trust as a major emotional change he experienced. After stabilizing in a permanent home, he "felt more trusting, more secure." The relationships he developed as a result made him feel "like I had my own home."

Spiritual change was another way the transition process was characterized. Several boys attributed their transition success to spiritual changes that occurred during the transition process. For example, Cristian reported that he was more open to receiving help from his counselors after he connected with a higher power. He was more willing to accept their authority and follow rules when he felt something larger was a stake. He seemed comfortable with the idea of submitting to God's authority, but less comfortable with the idea of doing something simply because a counselor said so. Thus, connecting with a higher power made him open to the assistance counselors had to offer and he was able to attend to the problems in his life with greater seriousness. For Martin, transition was about realizing that continuous growth is a vital part of existence. Developing a spiritual life helped him to commit to working hard and learning, by helping him redefine life as a growth process. This gave his life a distinct future orientation, which was not as present when he was on the streets.

Many of the boys also spoke about developing new perspectives as part of their transition process. Transitioning, according to the boys, was learning to see street life as dangerous and the pleasures it offered as only temporary. This cognitive shift was a central part of the change they experienced in becoming stable in a permanent home. In the process of transitioning, Martin came to the realization that "having things" was not going to make him "somebody." He learned that education had more redeeming value over "things" and set about redefining himself as a student instead of a street kid. Franklin had trouble accepting the rules of the Esperanza homes at first and sometimes missed the freedom of the streets. Part of his transition process was recognizing that it was in his interest to put up with them. He also became more conscious of his actions and what he could accomplish with a little foresight. "Before," he explained, "I did whatever I had to do, but never with any sense of purpose. Now I've learned that you need to plan things."

Self-redefinition was the final change reported by the boys. For many, change was about "becoming somebody," leaving behind their previous identities as "punks," "bums," and "nothings." For most, that happened through education. "[Studying] to become a professional was my only desire when I came here," explained Florentino, "I want[ed] to be someone in life." His commitment to this new identity helped him stay on track and resist temptations. When family members visited him in the transition home and offered to buy him various things if he returned home, he decided against the offer because he knew if he stayed, he might be able to make up a year of school that he lost. "I didn't want all those things," he explained, "I didn't care if they bought me anything or not. That used to be important to me, but now it's all about studying, not the streets and all that." Though many of the boys felt they had left their previous "street kid" identities behind as they made the transition off of the streets, several were still working toward "becoming someone" and believed that goal would be fulfilled when they graduated and "became professionals." Thus, identity change was not simply binary but was seen as an evolving process.

PERCEPTIONS AND INFLUENCE OF THE ESPERANZA RESIDENTIAL PROGRAM

In the boys' narratives of their experiences transitioning off of the streets they described their ability to successfully stabilize in the Esperanza Program. When reflecting on what enabled them to stay in Esperanza's transition homes, many boys first referenced their experiences in other homes to explain what was different this time. These experiences influenced their perception of Esperanza, which was directly related to their decisions to stay in the program and not run back to the streets again. All but two of the boys reported that they spent time living in other residential programs prior to entering Esperanza; most had lived in four or more. In general, the boys described their experiences in other homes negatively, which is not surprising given their departure from each one. The most frequent complaint proffered was abuse from older boys. According to several boys, other homes were crowded and overrun with kids and the quality of care provided was lacking.

Some programs required the boys to work selling things during the day to earn money to support their own care. Cristian failed to see how that was helpful. "Since I knew how to steal, that was easier and faster," he admitted. Other homes offered programming or structures that some boys found helpful, but allowed boys to be on the streets during the day which ultimately undermined those efforts. Tito particularly liked one program's evening classes and tiered structure. He initially did well there and worked his way up to the second highest level, enjoying the better quality rooms and privileges. But since he spent a good portion of each day with friends on the street, he eventually fell back into using drugs, lost his privileged status, and left the home.

For some of the boys, Esperanza was just another program. They were not drawn to it for any particular reason, but when they had the opportunity to visit, they opted to see if it suited them. In these cases, the nature of the program had no impact on the boys' decision to leave the streets. For other boys, however, the program as it was presented to the boys by street outreach workers, did have particular appeal. Adrian, who was in the hospital recovering from a street-related illness, was planning to return to the streets upon his release but was intrigued by an outreach worker's description of the program. "[She said] it's for 10 boys and after you are rehabilitated, you can go to another house where you have a mom and a dad. That sounded good to me because on the streets you don't have a mom and dad." Other boys were not aware of program specifics until after they arrived at the transition home, but also mentioned the "family-like" atmosphere as a key part of their attraction to the program. Franklin admitted he never tried another home because he had been discouraged by the descriptions his street friends provided and followed their advice to "not bother." But Esperanza seemed "different," he said, "I felt accompanied by the counselors and other boys, like it was a family, together and not alone."

The boys identified various resources, experiences, and supports at the Esperanza houses that helped them make a successful transition off of the streets. Their accounts of helpful intervention fell into four general categories: human and spiritual support, programmatic support, getting an education, and focusing on the future.

The boys talked about human supports that they found especially helpful. For many boys, human support was about having adults they could "go to with problems" who would respond with help. Tito said he feels "happy" because he has people who "understand and listen" to him. The advice and encouragement offered by adults (primarily their counselors), particularly during intense periods, made a substantial difference in the boys' ability to achieve stability. During their time in the transition home, most boys struggled with the temptation to run back to the streets. Running tended to be their default reaction to conflict or stress during the early stages of the transition process until they developed other methods of conflict resolution. Martin claimed that in those difficult moments, "everyone helped me. They would say 'Don't go. Think about it.' They would make me wait an hour . . . so I would think and reflect and then I would stay."

Like Martin, Tito benefited from taking time to carefully think through his decisions. He also saw counselors use their own advice, which helped him trust its value. He took notice of how the counselors were able to cope with their own life challenges and still interact in positive and supportive ways with him and the other boys in the home. That they did not take their anger out on him when they arrived went against his previous experience and stood as a living lesson in anger management. Other boys mentioned that talking with counselors helped them feel “a lot calmer” and “less depressed,” and that the help they offered made them feel “supported” and “cared for.”

The experience of being trusted by counselors was another way in which the boys felt supported. For a few boys, the chore of buying bread at the local bakery meant far more than coming home with breakfast. It was a test of their trustworthiness and a measure of their transition progress. For Florentino, it was when he was asked to buy bread that he began to realize he had changed. “They started trusting me,” he explained with pride, “First they would give us like 20 pesos to go buy bread in the morning. Sometimes they sent me with even 100 pesos. It made me feel happy.”

In addition to counselors and house parents, family members also served as key supports for some boys. It was unclear how many of the boys had contact with family members during their transition process and to what extent, but several mentioned that having their residency in the home endorsed by members of their family had a significant impact on their ability to stay. Florentino appreciated his family’s support. His sister’s characterization of the home as a fortunate opportunity helped Florentino see more clearly the advantages he would have if he stayed. He was inspired to not repeat his sister’s mistakes.

Many of the boys cited the spiritual support and moral teaching they received as instrumental in helping them make the transition off of the streets. The lessons they learned through formal and informal instruction, and through individual reflection helped them make the changes they deemed necessary for successful transition. One of the primary instructional vehicles mentioned as helpful by the boys were “devotionals.” Alex credits the devotionals with helping him learn “to recognize my mistakes, that nobody is perfect, that we’re always going to make mistakes. Even grown ups make mistakes, too.” For Alex, the devotionals fine-tuned his sense of right and wrong, which improved his ability to assess his own behavior and make better choices. The message that “it’s OK to make mistakes” was the preeminent lesson he learned, suggesting that perhaps forgiveness was of some importance in his transition experience.

In addition, boys learned and were taught things they considered valuable through group counseling sessions, informal conversations with caregivers, and opportunities for personal reflection. They learned about "what is good and what is bad," how their actions affect others, and how far they have come, all of which helped them develop stability off of the streets. The group counseling sessions taught Alex "that we have to respect each other . . . that we don't have to fight, that we can talk to each other in a nice manner." Tito considered learning how to respect others particularly important, too, "because if you don't respect someone, they are not going to respect you. They told us that respect breeds respect." As they learned to "talk with respect" and rely less on physical aggression, they saw the benefits of this wisdom.

Informal conversations with caregivers reinforced the lessons taught in more formal instructional settings and helped the boys examine certain behaviors with increased perspective. Martin said talking with counselors, "helped me realize that when you steal money from a woman or a man, you leave them without anything. . . . When I was in the street, I didn't really care if I hurt people. I didn't even know if I hurt them or not."

Many of the boys also mentioned certain programmatic supports that included consistent structure, boundaries and responsibilities. Lucho appreciated the full daily routine. He liked having a sense of purpose from the moment he woke up in the morning and felt good being productive. Florentino liked having a schedule, as well, and added that "It helps because . . . like if I'm going to play soccer for an hour and then do my homework for an hour, that's my plan. If I don't have that schedule, then I'd play soccer for two hours and I wouldn't have time to do my homework." Having a structured schedule to which he was held accountable helped him manage his time and accomplish daily goals that he otherwise might not have accomplished. Tito appreciated the value of having responsibilities. Through chores like washing his clothes, Tito was able to see the value of his own work. The effort he put in would be reflected in his appearance and that motivated him to do a good job. Thus, having responsibilities helped him develop a work ethic, and having a work ethic helped define him as something other than a bum.

Social activities were also frequently mentioned for their value in the transition process. Florentino said that "spending time with the other boys and counselors, playing, at lunch, joking around" was what really helped him to adapt to life off the streets. This answer was curious since he had also mentioned spending time with his family when he lived at home. He explained the difference saying, "I hung out with my family, but I didn't really know them. And sometimes you get bored when every day is the same old same old, you know? You get bored." This comment suggested that he enjoyed deeper relationships with the boys and counselors, and that the time he spent with them went beyond a boring daily routine.

For a few boys, an incentive program was particularly helpful. Adrian discussed the *Super-tienda* program that was enacted in the transition home, explaining that when you demonstrate certain values, like "honesty, kindness, being helpful," you can earn tokens with which you can buy things in the campus store. "I have a ton!" he said proudly, but so far he has not redeemed them, which suggests that their value may be more than their purchasing power. Tito liked the "Rally" program. "That's where you earn money if you behave and if you do all of your chores. . . . When I would do things well, they would tell me I earned more points and then I could earn money to buy myself something. It made me want to do the things I had to do." These programmatic initiatives seemed to inspire a sense of pride associated with meeting obligations and demonstrating desired attitudes and behaviors, and the rewards served as additional motivation.

Other boys talked about the "godparent" program as especially meaningful. Throughout the Esperanza Program's development, various individuals from sponsoring institutions in the United States have visited the homes in La Paz and built relationships with the some of the boys. Some have become "godparents" to some of the boys and continue to correspond with them via letters.

Since getting an education was often viewed as the key means to "become somebody," educational opportunities served as a central source of motivation. For a few boys, learning was simply enjoyable and they were excited by the new challenges they encountered in school. As Lucho explained, "I felt really good studying. When the teacher went fast, I liked going fast, too, because I felt fulfilled. I was getting ahead." Lucho was stimulated by his learning experiences in the classroom of the transition home and was excited by the possibility of enrolling in school. Not wanting to lose that possibility helped him to stay in the home and not run back to the streets. "I wanted to learn," he said, "so I didn't want to leave. . . . They were saying that if I tried hard, I would be able to go to school." Other boys saw enrolling in school as a major step in their transition process, but had some trepidation at the prospect. "I was really happy about it," said Adrian about entering public school, "but I also lost a few years. So, I'm supposed to be in eighth grade, but I'm only in fifth now." Nevertheless, he felt being enrolled in school was better than being in the remedial program in the home (primarily for the extra social opportunities) and he talked about this move as a major accomplishment. It seemed he and several other boys saw a direct connection between the years they needed to make up in school and their level of transition success. It almost was as if each year of school they could make up would erase a year lost on the streets, giving education a certain power of redemption.

Finally, the boys' accounts of what helped the transition process were notably future oriented. In this way, they stood in sharp contrast to the boys' accounts of their lives in their original homes and their lives on the streets. While arguably this could be due to the simple fact that they are now older than they were when they were with their families or on the streets, the boys clearly felt motivated by certain goals they had or promises they saw in the future. Focusing on those goals and possibilities helped them resist the temptation to run back to the streets and commit to stabilizing in the home. When Florentino and another boy were talking about running away, counselors helped them envision how their futures would be affected by whatever choice they made. Viewing the future in such a tangible way was a new experience for Florentino; one that had a profound effect on him and helped prevent his return to the streets. Damian said he realized that staying in the home "was really going to open doors for me. First, I'd have to learn to behave myself and obviously that would open doors for me. . . . But when they talked to us about going to college . . . that really excited me." During his time in the Esperanza Program, he has thought often about finishing high school and going on to college. "More than anything that's been my goal," he explained, "and it has motivated me to keep going." Diego was similarly motivated. Referring to Esperanza's plans to open a special dormitory-like facility to support boys during higher education and in their transition to independence, he said "It really excited us when they talked about the apartments. It really excited all of us to think that we would be able to continue studying."

Excitement about the future gave some of the boys a distinct determination to succeed. They were determined to accomplish primarily educational goals for the identity enhancements they would bring, but also to be able to demonstrate their capability to others. They hoped to impress their family members, but they also talked about wanting to prove something to society, as well.

A FRAMEWORK FOR TRANSITION SUCCESS

The boys identified a variety of factors—behavioral changes, spiritual transformation, academic achievement, rules and responsibilities, plans for the future, and being able to experience success and observe their own progress—that they believe contributed to their transition success. However, the set of related constructs that were indirectly, but strongly evident across discussions was their relationships in working with program staff and the climate that the institution as a whole espoused about relationships and the positive value of each human being. It was not unusual for the boys to begin their explanations of what enabled their transition success with, “My counselor told me that . . .” or “Whenever I would get frustrated, my house dad . . .” Yet, when directly asked, they credited the skill or the lesson with facilitating the process. Interestingly, though the boys did not tend to describe their relationships with adults or their peers in the residential program as central to their process of transitioning off of the streets, they did directly claim that the difference between the residential program and their original homes had much to do with relationships. The boys claimed that their family members “didn’t really know them” or that they “had no control” or that they were not involved in their lives. This disconnect seems important, especially considering that family members often offered lessons and endorsed values consistent with those promoted in the residential program.

The boys spoke at length about the lessons they learned in the residential program and demonstrated a sense of ownership over the values they claimed to have learned there. The Esperanza Program consciously attempts to promote certain values (words like honesty, integrity, kindness, and respect decorate the walls of the homes with pictures illustrating their social value).

In similar ways, this is what facilitated the function of the protective supports being offered by the Esperanza Program. Though each support, whether it was educational assistance, rules and boundaries, or an incentive program, had value in its own right, they were all embedded within a relational context that seemed to enable their coordination and unleash their power. As part of their transition process, the boys developed a new identity that was embedded in a relationship with the caregivers and the program itself. Though at times they were tempted or compelled to give in to “street” values and behavior, they became increasingly unwilling to break the relationship they had developed with the program and its agents because it was intricately connected to their new identity.

In a recent study, Aronowitz (2005) attempted to identify the mechanism of resilience among youth who participated in risk-taking behaviors. The grounded theory that emerged from her research lends support to the idea that protective factors can be activated through relationships. Her findings build upon the well-established notion that relationships with caring adults can play an important role in mediating risk (Aronowitz, 2005; Rhodes, 2002). They suggest that relationships serve as the context through which risk-taking youth can envision the future and acquire the motivation to reduce their risk-taking behaviors. This happens as those relationships provide modeling, monitoring, and coaching, and as they help counter stereotypes, increasing feelings of competence and raising expectations of the youth. These specific findings are reminiscent of themes that emerged from this study. Three responses to this relational exchange seem to characterize the boys after successful transition: hope, trust, and personal agency.

First and foremost, the transition process was about hope. Admittedly, the amount of hope the boys had when they first entered the residential program was just enough to get them through the front door, but not enough to possess any degree of expectation. Over time, however, increased hope developed as boys were helped to examine future possibilities. As they observed and experienced opportunities for positive self-development (opportunities like educational support or interaction with foreign visitors, for example) they became more committed to their own futures and were hopeful about their prospects for success. Thus hope both facilitated and was facilitated by greater future orientation and knowledge of specific resources and opportunities. Increased hope then fed into the larger system of faith and relationship. As hope increased, faith in the transition process was bolstered and boys were more willing to trust in their relationship to the program and its agents. Hope was further supported by religious values, specifically the belief that faith would bring reward. Several boys expressed this belief in the literal sense, referring to the Christian concept of justification, or the idea that salvation would be granted to those who have faith. Most, however, focused more generally on the idea that God would reward ongoing efforts of self-improvement; if they worked hard, they could earn a diploma, get a good job, and be able to provide for their families.

Trust was another key part of the transition process. In order to experience success, the boys' faith in what might be possible required them to trust in others, trust in the programmatic system, and trust in themselves. As they experienced their caregivers and the programmatic promises as trustworthy, they experienced themselves as worthy of respect and investment. Over time, these relational experiences of trust fueled increased faith in the transition process and strengthened the relational context that supported and contained the boys' new identities as children who had left the streets. Lucho shared a powerful comment about the function and value of trust when he said that trusting helped him develop deeper relationships, and as he did he felt "like I had my own home."

It is tempting to think that the family environment offered to the boys through the Esperanza Program became real for them over time and that their adopted new home was a preferable replacement for the original. If the boys had not spoken so often about their strong desires for connection to their original families, we might have been more willing to believe this idea. What Lucho means here, and what the boys in general feel, is that through the process of transitioning, they became part of a relational system that helped them develop a new and stable identity. This new identity was characterized by certain values, beliefs, and experiences associated with healthy life off the streets and was supported by the shared caring and moral belief between the boys and their caregivers. Lucho, the other boys, and their caregivers all believed in the promise and value of transitioning off of the streets and they all had faith that success was possible. Lucho felt like he had his own home because he had a deeper sense of who he was and who he wanted to be, and that was rooted in a consistent and consuming system. There was synchrony between what Lucho believed he could do and be and what those around him believed. When family members entered into this system and reestablished relationships with the boys, they became a part of this synchrony and their presence lent exponential power to the boys' commitment and ultimate success.

A final component of the transition process had to do with personal agency. A subset of the protective factors and experiences recalled by the boys related to skills and abilities they developed. As they acquired more adaptive social skills, as they learned how to follow a schedule and were reintegrated into school, and as they learned concrete lessons that helped them better understand the value of things like respect and hard work, they developed an increasing sense of personal agency. They began to see how they could act as agents in their own world and control certain elements of their own existence. For example, boys often spoke about understanding that if they studied hard and applied themselves at school, they would be able to graduate and obtain employment. They also began to understand concepts like "respect breeds respect," and the results they saw when they applied this wisdom reinforced the idea that they could potentially influence how others might respond to them. Experiences like these helped them develop an internal locus of control, which has frequently been associated with increased resilience across populations at risk (Luthar & Zigler, 1991; Rutter, 1987).

DISCUSSION

Findings related to the backgrounds of the boys and the experiences they had prior to moving to the streets confirm the findings of prior research and add important new details. Poverty, maltreatment, and domestic violence have proven to be common factors in the families of children who end up living on the streets (Bond, 1993; Scanlon et al., 1998) and they were common factors in the backgrounds of the participants of this study, as well. Likewise, movement onto the streets was the result of a combination of previously documented "push" and "pull" factors.

The reasons boys gave for being in the streets—primarily the abuse and neglect in their homes and the opportunities for diversion, socialization and economic opportunity on the streets—are relevant to understanding their trajectories but alone provide only a limited picture of what occurred. As the boys shared their experiences, a central story emerged that, while not true in every way for every participant, communicates complex and multilayered struggles that implicate the need for various levels of intervention. Findings demonstrated that, although the boys' families contributed to their existence on the streets in the first place, they also played a significant role in helping the boys transition off of the streets. In some cases, the families served as motivation for their transition success. Some of the boys wanted to succeed so they could help their families in the future, while others wanted to make them proud of their accomplishments. In other cases, families provided more direct support, visiting boys in the program and encouraging their progress. Thus a key finding of this study was that families played an important role in the boys' transitions both onto *and* off of the streets. This finding echoes findings in the research on runaway and homeless youth in North America, which identified family members as key helping resources in youths' transitions off of the streets (Kurtz et al., 2000; Lindsey et al., 2000).

Noticeably absent from the literature on street children is the role of schools. We know from the considerable body of research on resilience that activities and supports outside of the home can serve as powerful buffers to the risks associated with family dysfunction and poverty (Luthar & Zigler, 1991; Rutter, 1987; Scales & Leffert, 1999). Schools, as mandated participants in the lives of children, have an unparalleled opportunity to provide a buffering effect and are therefore frequently a focus in the discussion on how to promote youth resilience (Scales & Leffert, 1999). Yet, their role has rarely, if ever, been examined in the experiences of street children. This study revealed that school and educational achievement are significant factors in the transitions of children onto and off of the streets. All but one of the boys in this study had neutral or negative experiences in school prior to leaving home and frequently opted to skip classes to pursue other activities on the streets. For them, school was not a positive alternative to their homes and it frequently contributed additional stresses like bullies, academic failure, and punishment for misbehavior. The one boy who did have a positive school experience prior to running to the streets had a strikingly different overall trajectory from the others, which suggests that school may have played an influential role.

Despite the negative feelings about school the rest of the boys had before and during their time on the streets, all possessed a firm belief that education was a way to "become somebody." Experiencing success in the classroom or reaching important milestones like being reintegrated into school helped boost their self-esteem and reinforce the notion that they were no longer "nothings." In difficult moments when the temptation to run back to the streets was great, it was often the thought of losing educational opportunities or standing that convinced them to stay. They found strength in the promises offered by educational achievement: they could become someone, they could make their parents proud, and as employed professionals, they could have the financial means to help their families. As a powerful variable, educational achievement thus has the potential either to bolster a boy's transition success, or threaten it, if he experiences failure in his educational pursuits during the transition process.

Another difference between the findings of the runaway youth literature and the findings of this study involves helping resources. In the former, helping resources are frequently discussed as primarily human resources (Bender et al., 2007; Kidd & Davidson, 2007; Kurtz et al., 2000; Lindsey et al., 2000). Former runaways tend to focus less on program details and more on the quality of relationships they have with helpers when discussing what enabled their successful transitions. Though human support was a category that emerged in the boys' stories of what they found helpful in the transition process, programmatic support emerged as a theme of equal importance. Many boys viewed the structured schedule, boundaries and rules, and daily responsibilities of the transition program as especially helpful. Some also mentioned incentive programs, through which they could earn rewards for either demonstrating positive behaviors or completing chores. These programmatic elements seem to have contributed a sense of stability, upon which boys could measure their progress and achieve a degree of control. Their increasing ability to master the challenges set out in the transition program—challenges like completing homework and chores, and respecting others and not fighting—helped them feel more grounded in their lives off of the streets and oriented them toward the possibilities of the future.

The ability to focus on the future was strongly associated with transition success in the boys' stories of their experiences. The more boys developed a future orientation and began to imagine concrete aspects of how their lives might unfold, the more they were motivated to commit to the transition process. As they moved forward achieving goals that were set for them by the program, or that they set for themselves, they felt less connected to their lives on the streets and even more focused on continued achievement. It was only after the boys began experiencing some success off the streets that they seemed to develop the strong determination discussed in the runaway youth literature as a critical personal attribute in resilience.

IMPLICATIONS FOR RESEARCH AND PRACTICE

The results of this work bear some important implications for both research and practice. Since the body of literature on street children is still so limited, there are many opportunities for further research. In general, research needs to expand beyond defining the problems of street children from various angles and begin exploring pathways toward different solutions. Additional qualitative research is needed to build upon the findings of this study and explore the experiences of other groups of children who have successfully transitioned off of the streets. Comparative studies of children with similar backgrounds who do and do not leave home would help us identify more discrete sources of risk and resilience, as would comparative studies of children who do and do not choose to leave the streets. Finally, given the very limited successes that practitioners see relative to the numbers of lost children, practice-based research would provide an opportunity to examine more closely the strategies currently being used to intervene in the lives of street children and identify potential areas for improvement or change.

This work bears implications for practice on multiple levels. First, findings from this study reveal opportunities for preventive practice. Certainly, intervention efforts directed at families to help stem intrafamilial violence and teach more effective and humane disciplinary strategies might make a substantial difference in preventing the flow of children onto the streets. Additionally, programs that engage children and provide stimulating activities and social opportunities during out-of-school time could make a substantial difference by occupying many of the hours children are currently spending looking for stimulation and socialization on the streets. Another opportunity highlighted by this study involves the school as a potential source of support. There is promise in the idea that schools could participate in identifying children at increased risk of being on the streets and collaborate with other service providers to offer preventive supports of various forms.

For practitioners providing intervention services for those already living on the streets, this study offers some particular suggestions. Transitioning off of the streets seems to require intensive and constant relational and structural supports. Having counselors and other staff members available at all hours to provide real-time support to children in crisis moments may limit returns to the streets and contribute to the development of important transition-related skills. Opportunities to see the future in concrete ways, experience achievement, and measure progress can help reinforce the transition process in ways that promote greater commitment and determination. Given the substantial value boys seemed to place on educational achievement, the provision of supports to enable success in this area would likely accomplish far more than just academic progress.

The significance of family cannot be underestimated. Practitioners should explore how family members could be involved to help support the transition process. Though it is likely many children will continue to need residential care into adulthood, opportunities for family reintegration, possibly involving shared responsibilities for care with support programs, should be examined.

Finally, it is recommended that practitioners attend to the relational and spiritual lives of the children in their care, since both of these factors play a powerful role in helping children transform their lives. More research is needed to explore exactly how this might be done in the most respectful and healthy ways. However, at a minimum, rituals or activities designed to help promote forgiveness, activate deeper consciousness, encourage moral development, and foster more future-oriented thinking might prove beneficial.

As Ungar et al. (2007) stated, “Resilience is not a permanent state of being, but a condition of becoming better” (p. 301). The boys stepped into relationship with the Esperanza Program and their counselors when they entered the transition home. They took a leap of faith that this decision would be fruitful. Their faith involved elements of hope (that this move would bring some benefit), and trust (that the people would deliver on their promises and that what they offered would be valid and worthwhile), and it was strengthened and deepened as the boys developed a sense of personal agency that in turn supported their ongoing faith development. There were blips in this process to be sure. In those moments when the boys were ready to run back to the streets, when their faith in the transition process waned, their relationships to their caregivers came into direct play. The caregivers reminded the boys of their connection to the transition process. As they tried to dissuade the boys from giving up, they evoked hopeful images of the future, they pointed out ways in which their trust in the system had been honored, and they asked the boys to make their own decisions after thoughtful reflection.

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Chapter 2

CHALLENGES AND OPPORTUNITIES: IMPROVING EARLY CHILDHOOD DEVELOPMENT IN SOUTH AFRICA

Andrew Dawes and Linda Biersteker

It is well established that the early years are a particularly sensitive period. Brain and biological development in the early years is experienced based, leading to neurophysiological pathways being laid down in synaptic formations in the brain (Young & Mustard, 2008). These establish the foundation for emotional, language, motor and cognitive competencies. The quality of sensitivity provided in early relationships with caregivers is integral to this process. The developmental sensitivity of this period provides both opportunities for laying a positive foundation for the child's future emotional and intellectual development, as well as being a time during which developmental insults can have a long lasting impact. Interventions to support a sound early start and limit vulnerability is particularly important in resource compromised communities such as prevail in South Africa (Engel et al., 2007; Richter, 2004).

South Africa presents a particularly interesting case study of a middle income developing country that is attempting to grapple with the challenge of improving early childhood outcomes in the context of a society in transition, a relatively low skill base, long-term structural inequality, high levels of interpersonal violence, and the ravages of the HIV pandemic (Republic of South Africa, 2009).

It is perhaps not sufficiently appreciated that the after the country's liberation in 1994 (a mere 16 years ago), a legal and policy revolution had to be undertaken. The new state inherited racist legislation and policy that applied to children—all had to change. Racially divided health, education, and social welfare systems and their bureaucracies had to be integrated. Five additional provincial governments were established with responsibilities for implementing national policy in matters affecting children (e.g., health, education, and welfare). These were huge undertakings and they are still being completed; for example, the Children's Act (No. 38 of 2005 as Amended 2007) legislation that seeks to promote children's welfare and development. South Africa's first guidelines for Child and Adolescent Mental Health were published in 2003, and the post Apartheid Mental Health Act (which has minimal reference to children) was promulgated in 2006 (Flisher et al., in press).

The Children's Act is the most important piece of legislation in regard to provision for early childhood and child protection. It recognizes the importance of early intervention and the vulnerability of young children. Its central objectives are to "promote the protection, development and well-being of children." The Act also makes extensive provision for early childhood development services and for child protection interventions.

The Act is a wide ranging piece of legislation, and a major advance on the earlier law. It is anchored firmly in a child rights framework, and establishes the responsibilities of government and those who care for children, particularly the most vulnerable. However, regulations, standards and procedures remain to be finalized rendering the implementation of policy an uncertain process.

The most important policy document in recent years is the National Integrated Plan for Early Childhood Development (NIP for ECD) (Departments of Education, Health, and Social Development, 2005). The NIP recognizes key threats to early health and psychological development and outlines a range of commitments to improving services to children under five years of age (Biersteker & Kvalsvig, 2007). The NIP specifically targets the poorest and most vulnerable children for intervention, recognizing that it is this sector of the child population that requires the most support. The NIP emphasizes a holistic approach to improving child well-being, strengthening human capital outcomes, and reducing threats to healthy development.

The NIP for ECD policy states (Departments of Education, Health, and Social Development, 2005, p. 17):

> Ultimately, the integrated intersectoral ECD should
>
> - create environments and situations in which children, particularly vulnerable children, can learn, grow and thrive socially, emotionally, physically and cognitively;
> - increase the opportunities for young children to prepare for entering formal schooling;

- provide support to adults who care for young children and the communities in which they live, in order to enhance their abilities to care for and educate these children; and
- reduce the adverse developmental effects of poverty and other forms of deprivation on children from zero to four.

This is an ambitious policy initiative. Its primary locus of delivery is in local sites, be they clinics, ECD centers and the range of home-based interventions currently offered with the NGO sector. There are many challenges in delivering on this promise. We point to some ways in which evidence and appropriate evaluation can strengthen delivery and impact on child mental health.

South Africa's burst of child policy making energy had its roots in a strong civil society movement that fought for child rights and protection during resistance to apartheid. That history as challenging as it was, provided a significant opportunity to place children at the fore of the policy making process. The continuing challenge is to realize the goals of fine law and policy in the face of multiple threats to the well-being of young children.

The remainder of this chapter proceeds from a brief outline of the contexts of children's development in the country, to a consideration of the major threats to well-being in a developing country such as South Africa and finally to a discussion of four promising initiatives that seek to address them. The focus will be on prevention of adverse experience and promotion of sound development.

EARLY CHILD DEVELOPMENT IN SOUTH AFRICA

ECD is defined as in South Africa as

> an umbrella term that applies to the processes by which children from birth to about nine years grow and thrive, physically, mentally, emotionally, spiritually, morally and socially. (Department of Education, 2001, p. 3)

While the period extends to nine years, the chapter will focus on the under fives. Major contextual influences on the quality the early childhood environment for the majority of South African children are described in this section. They include population structure, income distribution and poverty, the major causes of morbidity and mortality for adults and children, and the educational environment for young children. The reader who wishes to have more detailed information on household and child statistics is referred to http://www.statssa.gov.za/ or http://childrencount.ci.org.za/ and to the Development Indicators report of the South African Presidency (Republic of South Africa, 2009).

POPULATION

It is inappropriate to speak of a single South African childhood. These are many and varied: significant, though unknown numbers of children grow up on the streets; others live in rural subsistence agriculture communities that uphold traditional African ways of life, while the majority live in cities and towns (see later). South Africa has eleven official Languages and at least twice as many are spoken in the smaller ethnolinguistic communities (including migrants and refugees from the north). Children grow up in a number of religious communities, the largest being Christian, but with significant minorities of the Muslim, Hindu, and Jewish faiths (Statistics South Africa, 1999). In 2009 the South African population[1] was estimated to be 49.32 million (Statistics South Africa, 2009a).

Many children growing up in towns and cities retain strong connections with their rural roots as children of recently urbanized families may shuttle between town and country at different points in their lives. Statistics on the matter are not available, but in the authors' experience, it is common for a mother in town to send her child to the countryside for primary school, and for the child to return to the town for senior schooling due to limited facilities in the countryside, or in anticipation that she will receive a better education.

The child population disaggregated by "race"[2] is displayed in Table 2.1. It is important to disaggregate early childhood to those over and under five years of age as the latter is a particularly sensitive time in the life cycle. Just as there are huge opportunities during this developmental period for laying sound platforms for children's future development, insults to health and development can also have long lasting impacts (Engel et al., 2007; Grantham-McGregor et al., 2007).

Table 2.1
South African child population

	Child population under 18 years N *(% of total South African population)*	*Child population under 9 years* N *(% of total South African population)*	*Child population under 5 years* N *(% of total South African population)*
Black	19,594,400	9,742,800	4,820,200
White	1,120,600	510,700	248,700

INCOME DISTRIBUTION AND POVERTY

Poverty presents a range of risks to early childhood development, particularly in the earliest years (Aber & Bennett, 1997). Due to a range of factors, including the policies of the white minority government prior to 1994, a poorly educated young population, high unemployment, and limited economic growth, the vast majority of children live in poverty (the white minority is minimally affected) (Republic of South Africa, 2009). South Africa does not have consensus on the measurement of poverty. A commonly accepted poverty line is those living in the poorest 40% of all households. Based on this metric, and using the 2005 Income and Expenditure Survey, Streak, Yu, and van der Berg (2008) estimate that 65% of all children (11.8 million) live in poverty, with 66% of those aged zero to four having this status. Clearly a vast number are vulnerable to the broad impact of poverty.

There is no state unemployment benefit in South Africa. However, the government is committed to assisting as far as possible. Parents with children under 15 years of age who have an income of less than about US$307 per month can claim a Child Support Grant valued at US$30 per month (December 2009 values). Current estimates suggest that 82% of South African children are eligible (Budlender, 2008).

Notwithstanding social grant income, South Africa is currently the most unequal society in the world with a Gini coefficient[3] estimated at between 0.66 and 0.68 depending on the survey (Republic of South Africa, 2009). The Human Development Index (HDI) in 2007–2008 was 0.674 ranking South Africa 121 of 177 nations.

MORBIDITY AND MORTALITY

Despite free treatment available to children under six years of age and high levels of immunization, those zero to four years are especially vulnerable to illness and death and the highest number of all deaths in the population in 2005 was for this age group The official estimated infant mortality rate in 2009 is 45.7, and the Actuarial Society of South Africa model estimates the under five mortality rate to be 68 per 1,000 (Republic of South Africa, 2009). Infant mortality data is not reliable as only 82% of birth registrations are current (Statistics South Africa, 2007).

AIDS related illness is the leading cause of all child deaths (40%), with diarrhea, lower respiratory infections and low birth weight accounting for a further 27% (Bradshaw, Bourne, and Nannan, 2003). In those infected children who survive, it is likely that their neurodevelopmental status will be compromised, particularly when undernourished (Potterton and Bailieu, 2008; Sher, 2005). The estimated overall HIV prevalence rate is approximately 10.6% and the total number of people living with HIV is estimated at approximately 5.21 million. For adults aged 15–49 years who are most likely to be caring for young children, an estimated 16.7% is HIV positive (Republic of South Africa, 2009). An estimated 3.3% (300,000) of children aged 2–14 years is HIV positive (Shisana et al., 2005). As it uses a method to detect *recent* infection (and therefore not transmission from mother to child), the finding indicates that children older than two years are likely to have been infected through other pathways including sexual assault (Relhe et al., 2007).

Adult mortality contributes significantly to orphaning. Current estimates by the Actuarial Society of South Africa indicate that 1.5 million South African children are orphans as a consequence of parental death due to AIDS related illnesses (http://www.healthlink.org.za/healthstats/89/data/).

Two of the most significant threats to the well-being of young children posed by the AIDS pandemic are caregiver illness and death (Brandt, Dawes, & Bray, 2006). The illness of the caregiver commonly results in an inability to work, with the associated economic shock contributing to impoverishment. As important is that ill carers are not able to provide sensitive care and stimulation to young children (Richter, 2004).

Apart from the distress caused by the death of primary caregivers, the care arrangements are bound to change, with fostering by kin or others being common outcomes when there is nobody else in the household who can look after the child. A variant of this situation occurs when there are no adults in the household and the young child is cared for by older siblings, likely to be a suboptimal arrangement for both parties and likely to compromise the developmental opportunities of both. It is not uncommon for these young caregivers to have had to look after their sick parents prior to their death (Cluver & Gardiner, 2007; Cluver, Gardiner, & Operario, 2007). Interventions to prevent the spread of HIV are clearly crucial not only to reduce the numbers of those infected, but also to reduce the risks of emotional distress and psychological disorder that may arise from parental mortality or having to live with and care for a sick parent (see later).

Vaccinations are a crucial in preventing serious medical conditions in childhood. In 2008, 88% of children were fully immunized in the first year of life, 2% short of the target for the year (Republic of South Africa, 2009).

HUNGER AND NUTRITION

Nutritional status impacts significantly on child health and well-being. It is a serious concern in South Africa, where the most recent national survey indicates that 18% of children under nine years are stunted and almost 10% are underweight. Children under four are most affected with 23% stunted and 11% underweight (Kruger, Swart, Labadarios, Dannhauser, & Nel, 2007). Close to 9% (8.9%) of children have low birth weight status, which is associated with compromised nutritional status later on. These are national aggregated figures. In areas of deep long-term poverty, much higher rates are likely to be evident. Undernutrition is an even more serious problem in children with HIV infection, where more than half become stunted or underweight and one in five develops wasting (Hendricks, Eley, & Bourne, 2006).

Stunting is associated with developmental delay and is the strongest predictor of childhood mortality in children under the age of five (ACC/SCN, 1997; Pelletier, 1994). The condition has negative consequences for human capital development as early stunting and undernutrition compromise neurological development and hinder the ability of the child to benefit from education (Walker et al., 2007).

The wastage of human capacity occasioned by this easily preventable condition is significant. This is a key area for preventive intervention in early childhood and will be addressed later in the chapter.

DISABILITY AND PSYCHIATRIC DISORDERS

Accurate figures on the proportion of children with disabilities are not available. The estimated moderate to severe disability prevalence rate for all children is between 3.3% and 8.4%, depending on the measure, and for those under 5 it is 3% (Schneider & Saloojee, 2007). Incidence in rural areas may be as high as 8.3% in children under 10 years of age (Couper, 2002).

No representative prevalence surveys of child psychiatric disorders have been conducted. Based on research in other countries and on expert opinion, it is estimated that between 15% and 17% of South Africans under 18 years are likely to suffer from a psychiatric disorder at some point (intellectual disability accounts for 2% to 3% of the total) (Kleintjies et al., 2006). There are no estimates for children under age nine. The vast majority of affected children are unlikely to be able to access a mental health service as these are few and far between.

THE RISK OF MALTREATMENT

South African society is very tolerant of violence in the domestic sphere (Jewkes, Levin, & Penn-Kekana, 2002). Internationally, young children under five years of age are particularly at risk for maltreatment (Finkelhor, 2008; Cawson, Wattam, Brooker, & Kelly, 2000), and South African studies suggest a similar trend. Prevalence and incidence estimates for children under five years are not available in South Africa (Dawes & Mushwana, 2007). However, a series of studies conducted at the Red Cross Children's Hospital in Cape Town over a period of years provides some indication in the case of young children referred for traumatic injury: 66% of children referred for serious nonaccidental injuries had been sexually assaulted. In the case of physical maltreatment 56% of cases were in children under five years; the median age of assaulted children was two years; 66% of children treated for nonaccidental injury had been sexually assaulted (Dawes & Ward, 2008; Fieggen et al., 2004; Naidoo, 2000).

Police records notoriously underestimate maltreatment, but can provide some indication of the problem (Richter & Dawes, 2008). Nationally, children constitute half the victims of reported rape and indecent assault, and 10% of assaults are perpetrated on children; the specialist police unit that deals with child maltreatment opened more than 40,000 dockets in 2004. Figures for young children are not available.

Partner violence is another serious threat to the well-being of young children. It is well known that their emotional development is compromised by exposure to violence between their caregivers (World Health Organization & ISPCAN, 2006). Representative prevalence studies indicate that at least 20% of adults are involved in violent relationships, placing significant numbers of South African children at risk for psychological problems (Dawes, de Sas Kropiwnicki, Kafaar, & Richter, 2006; Jewkes et al., 2002).

EARLY EDUCATION

The poverty environments within which most South African children grow up do not provide good platforms for cognitive development and full participation in society. Nowhere is this more evident than in this country's poor schooling outcomes and low skills base. Against this background increasing access to early childhood education opportunities has become a policy priority in South Africa. This includes phasing in of a reception year of schooling (grade R) for all five-year-olds as well as a commitment to increasing access to educational stimulation through a variety of programs for younger children (Department of Education, 2001; Departments of Education, Health, and Social Development, 2005). Schooling is compulsory in the year children turn seven.

Accurate information on enrollment in ECD programs is not available for children under school going age. Estimates based on the General

Household Survey 2008 (Statistics South Africa, 2009b) suggest that 17% of children under five years access an ECD program.

Fifty-two percent of children attended grade R classes in primary schools in 2008 and 68% of grade 1 learners had attended preschool programs the previous year suggesting that another 16% of learners attended community-based grade R classes (personal communication, Monitoring and Evaluation Directorate, National Department of Education, 2009). Ninety-four percent of children (six to nine years) are enrolled in grades 1–3 at primary schools (personal communication, Monitoring and Evaluation Directorate, National Department of Education, 2009).

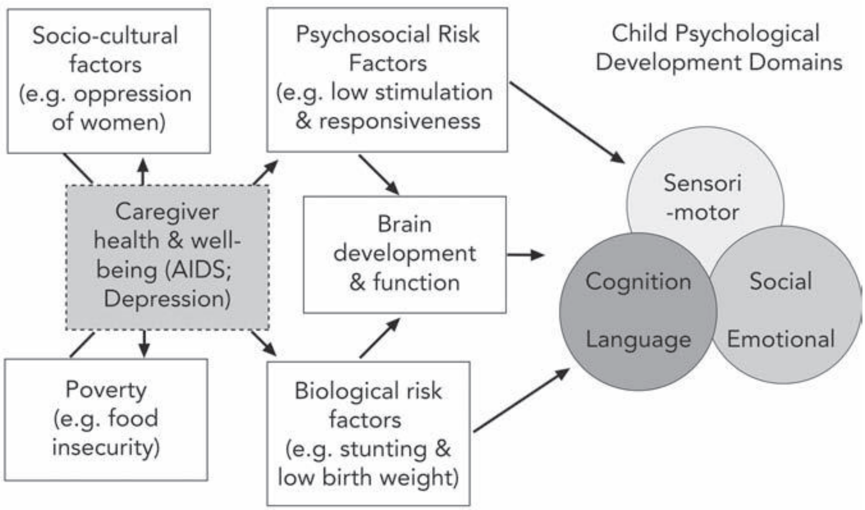
Though access to early education is increasing, the quality of services is variable and the capacity of many children to benefit is undermined by undernutrition, poor health and inadequate caregiving.

National assessments of literacy and numeracy are cause for concern with mean scores in grade 3 of 36% and 35% for literacy and numeracy, respectively (Department of Education, 2008). Improving the quality of education particularly in the early stages is a major concern for the Department and a number of initiatives have been put in place to address this (Biersteker, 2009).

We have described a range of risks to the well-being of a significant proportion of young South African children. The manner in which they operate to influence developmental outcomes is illustrated in Figure 2.1. We have added *caregiver health and well-being,* a mediating variable which is of critical importance in all development, but particularly in South Africa as a consequence of high prevalence of HIV and AIDS and infectious diseases such as Tuberculosis (Brandt, 2007; Brandt et al., 2006; Bray & Brandt, 2007; Richter, Manegold, & Pather, 2004).

Impoverished household conditions such as those that prevail in South Africa have been shown to impact on caregiver mental status. Also, recent studies of impoverished women with depressive symptoms are demonstrating how maternal mental state impacts on infant development. For example, a study conducted in rural Bangladesh found that depressed mothers were less sensitive to their infants than controls in the same community, and that low sensitivity and maternal depressive symptoms were negatively associated with infant development (Black et al., 2007). Similar findings are emerging from South African research where one recent study indicates that *maternal depression* may be a significant problem among young mothers living in poverty in this country (Cooper et al., 2009; Tomlinson, Cooper, Stein, Swartz, & Molteno, 2006). While more research is needed in South Africa, there is no doubt that when caregiver well-being is compromised, the capacity to care for young children suffers, and child

Figure 2.1
A conceptual model of how risk factors affect early childhood psychological development



Source: Adapted from Walker et al. (2007).

outcomes including health, nutritional status, and psychological development are compromised (Richter, 2004; Richter & Grieve, 1991; Richter, 1994; Martorell, 1996).

Interventions designed to reduce risks and promote early development need to appreciate each element of this complex chain of relationships.

INTERVENTIONS

A key goal of South African ECD services is to promote good child and caregiver outcomes, and the National Integrated Plan is particularly directed to improve the situation and outcomes of children affected by poverty and related risks (Departments of Education, Health, and Social Development, 2005). There is broad agreement in South African and other sub-Saharan African countries that certain key domains should be attended to in efforts to improve early development outcomes in the face of the considerable risks to child well-being (Engel et al., 2007; Walker et al., 2007). They include the following:

1. survival
2. health (including mental health nutritional status, HIV status, developmental disability and injury)
3. psychosocial development, including motor, emotional, cognitive, and language development and social development and participation

The domains comprising the third set are all relevant to capacitation for schooling and beyond. Each component is important for current well-being as well as for building the platform for schooling. For example, the cognitive domain includes mathematical and logical thought, representation and a range of memory capacities. The language domain includes language expression, emergent literacy and several others. Children's social characteristics, the quality of their relationships with others, the extent to which they are prosocial or antisocial in orientation, the degree to which they display empathy to the vulnerable, are all a product of their early relationships with caregivers, and the quality of socialization from the family through the school. Social participation refers to their engagement in group activities such as sports or the arts, and later in life to civic and political participation.

There is a wealth of literature on all these topics. We can only touch on some aspects here. In what follows, we focus on three issues that are major challenges for children in South Africa and the rest of the sub-Saharan region (Garcia, Pence, & Evans, 2008):

1. malnutrition rehabilitation
2. addressing the impact of HIV and AIDS on the young child in low resource settings
3. child maltreatment prevention in the home
4. programming for early childhood development in the years before school

Throughout, the discussion will principally consider the preschool years.

REHABILITATION OF MALNOURISHED CHILDREN

Malnutrition is one of four major risk factors for child development identified in the 2007 Lancet Series on child development in developing countries (Grantham-McGregor et al., 2007). Given the extent of chronic malnutrition in South Africa, as described earlier, and the impact of HIV on young children's nutritional status, government has put in place an Integrated Nutrition Program (INP) which has three main components, including the following:

- health facility–based nutrition program and strategies
- community-based nutrition programs and strategies
- nutrition and HIV and AIDS support programs and strategies

These span a range of promotive, preventive, therapeutic and rehabilitative activities. At risk, pregnant and lactating women and children under five years are priority targets for the INP. Key areas include nutrition education, promotion of exclusive breast-feeding, growth monitoring, food fortification, and micronutrient supplementation as preventive strategies.

In a recent review of nutritional strategies, Swart, Sanders, and McLachlan (2008) conclude that inadequate implementation rather than inappropriate policies and strategies is the basis for limited success of these policies. The review also recommends that interventions are scaled once they have been proven to work and with sufficient accompanying resources. We provide examples of two initiatives for malnutrition rehabilitation that have been shown to be effective.

The first initiative targeted management of severe malnutrition in two rural hospitals that both had high case fatality rates for severely malnourished children (46% and 25%, respectively). It involved forming a hospital nutrition team to assess the clinical management of severe malnutrition, action plans to improve the quality of care and monitoring and evaluation of activities. These actions reduced fatality to 21% and 18%, respectively, indicating that staff motivation and training even in remote facilities can improve clinical management and the quality of care for malnourished children (Swart et al., 2008).

A study of the Philani Nutrition program in Greater Cape Town (Le Roux, 2006) shows that home-based programs can be effective in reducing malnutrition. Children below the third percentile were identified through door-to-door home visits by outreach workers who had had a three week training in nutrition, general health, growth monitoring. They had been selected following a positive deviant approach in that visitors were from the same communities and living circumstances but their children were not malnourished. Children in the program receive a medical examination, micronutrients, and deworming, and advice on breast-feeding or nutritious and locally available low cost food was provided to the mother. Outreach workers conducted follow-up visits to the household in order to monitor the mother and child/children's progress. These visits were also used to educate the mother in practical parenting skills. Le Roux's study confirmed that child care practices are a key predictor of speed of rehabilitation. The intervention succeeded in raising the weight of 53.6% of the 500 nutritionally compromised children above the third percentile within 188 days.

As has been demonstrated in other similar settings (Walker, Chang, Powell, & Grantham-McGregor, 2005; Lewin et al., 2005), this initiative indicates that with support, community level workers with relatively little formal education can work with the child's carer in the home setting to facilitate improvements in children's nutritional status.

ADDRESSING THE IMPACT OF HIV AND AIDS ON THE YOUNG CHILD

The South African NIP for ECD (Departments of Education, Health, and Social Development, 2005, p. 12) states that

> one of the aims of the NIP for ECD is to ensure access to an appropriate and effective integrated system of prevention, care and support services for children infected and affected by HIV and AIDS.

There are several different categories of child affected by HIV and AIDS in the community and the family (Foster, 2006). They include children who are infected; children living in households within which carers and/or other members have HIV or are already ill with AIDS related diseases (Brandt, 2007); children who have lost caregivers to AIDS (Richter et al., 2004); those who have been fostered by relatives or others; those in residential care; those living in child headed households; and a recently recognized category, those children who care for sick relatives and their siblings (Cluver & Gardiner, 2007).

Infants and children under five who are living with AIDS are extremely vulnerable. Most are likely to have been infected by vertical transmission, but older children may have been abused or infected on visits to clinical facilities through failures to observe protocols (Brookes, Shisana, & Richter, 2004). HIV also impacts on the neurological development of those who survive (Sher, 2005).

The focus of intervention with these children tends to be biomedical, through provision of antiretroviral medication and nutritional support. They are also more vulnerable to malnutrition, diarrhea, and pneumonia, and the risk of death is high. They present enormous challenges, particularly to caregivers in poor households who themselves are HIV positive and may be ill. In the first instance, prevention of mother to child transmission (PMTCT) is a priority. Apart from one province (the Western Cape), there is no reliable national data on the success of PMTCT programs. Antiretroviral treatment for infected children is a complex matter. Currently 36% of the estimated infected child population is on treatment, clearly very inadequate (Children's Rights Centre, 2009). A further crucial medical intervention is the provision of antiretroviral treatment for women. Currently 54% of eligible women receive treatment (Children's Rights Centre, 2009). The number with young children is not known. In this chapter we will not deal further with the specialized topic of the medical response to HIV positive children (see Saloojee, 2007), but instead we will focus on the social and psychological impacts that need to be addressed by interventions.

Richter and colleagues (2006) note that while children affected by AIDS face particular challenges, targeting this group is not helpful as there are children rendered vulnerable by factors other than AIDS in communities affected by the virus and

> such a large number of vulnerable children requires the urgent strengthening of systems to improve the situation of *all* children living in communities affected by HIV and AIDS—to complement programmes that support the most vulnerable children. (p. 9; emphasis added)

While needing to address the specific needs of children affected by HIV and AIDS, community-based programs should *not* contribute to the tendency to select these children out from among the many other vulnerable children in AIDS affected communities. Not only does this ignore the many other vulnerable children, it duplicates effort and results in stigma due to the justified jealously of those equally vulnerable who receive no support (Richter, Foster, and Sherr, 2006).

A key consideration is to support caregivers, particularly those who are ill. These women are at risk for depression, and as we have noted, this in turn increases the risk of child neglect due their lack of sensitivity to the child's needs caused by their own distress. The emerging evidence is that poor women on antiretrovirals are likely to have better well-being and less risk of depression than women with AIDS who are not (Brandt, 2007; Brandt et al., 2006). They would also benefit from psychosocial support (Cooper et al., 2009) coupled to psychosocial interventions designed to increase their sensitivity and responsiveness to their children. Initiatives to improve support from neighbors and other community members are also important.

In terms of interventions, South Africa does not have a developed evidence base on psychosocial interventions specifically for children who are living in households where caregivers have HIV and AIDS. In many respects this is not necessary as we can draw on the range of literature regarding the benefits of psychosocial support to vulnerable caregivers and households. In addition, Richter et al. (2006) point to the "naturally occurring" protective resources and to the importance of drawing upon them, particularly in countries and communities that do not have the benefit of the formal psychosocial programming:

> Psychosocial care and support is provided through interpersonal interactions that occur in caring relationships in everyday life, at home, school and in the community. This includes the love and protection that children experience in family environments, as well as interventions that assist children and families in coping. (pp. 14–15)

For these authors, "*psychosocial interventions*" and "*psychosocial support programming*," interventions are distinguished from "p*sychosocial care and support*," which refers to the "everyday family systems of care which support children's psychosocial wellbeing" (p. 15). These everyday systems can of course be strengthened through intervention.

These are very useful distinctions that help us clarify what we mean when we talk about "psychosocial" interventions for young children affected by HIV and AIDS.

A key program message from Richter et al. (2006) is that

> children affected by HIV/AIDS have critical psychosocial needs. These are best addressed through supportive relationships and structures embedded in children's everyday lives. Standalone psychosocial interventions and programmes should *reinforce, and not replace, the essential psychosocial care and support that children receive from caregivers, relatives and friends*—support that occurs day-by-day and across the lifespan. (p. 29; emphasis added)

The first randomized controlled trial longitudinal study to be conducted in South Africa has recently appeared. The intervention tested the effects of a home visiting program that included an *early stimulation* component, on the neurodevelopmental status of young children infected with HIV. All the children were malnourished and their motor and cognitive development was delayed at baseline. The program was effective in improving the motor and cognitive outcomes of the children after a one year intervention. This is a very promising initiative.

Apart from this more recent research, Richter et al. (2006) note the dearth of good research on programming and stress the need for programs to be evaluated so that good practice can be established and programs can go to scale.

They list a range of promising responses to the situation of children affected by HIV and AIDS that is too detailed to reproduce here. To summarize, community and household level interventions for children living in family-like settings, the following are noted:

- home visits to monitor child well-being and raise awareness of children's needs; also to prevent abuse and provide support to vulnerable carers
- provision shelter and repair of shelter
- food support of various kinds
- a range of supports for access to health care particularly in rural areas
- provision of clothing to needy children
- availability of preschool programs (not necessarily formal)

- cash transfers
- specific support to families who foster orphans and other vulnerable children

Drawing on emerging evidence, Richter et al. (2006) provide a cogent argument for our need to support all vulnerable children in the family (or substitute family) context:

> The best way to support the wellbeing of young children affected by HIV/AIDS is to strengthen and reinforce the circles of care that surround children. Children are best cared for by constant, committed and affectionate adults. When the caregiving circle is broken for some reason, extended families normally plug the gap. When the circle of care provided by kin is broken, community initiatives need to stand in, and when the circle of care provided by community is broken, external agencies need to play a part. Embracing all efforts should be a strong and continuous circle of support provided by government provision and legislative protection. The optimal use of the resources of external programmes is to assist communities in supporting families. Families are best placed to provide for the psychosocial needs of young children. When it is necessary for external agencies to provide direct services to children and to families, their touch should be light and, to be sustainable, it should be balanced by appropriate actions to strengthen extended family and community supports. (pp. 11–12)

These comments should alert us against the provision of residential care as far as possible except as an emergency resort. Expert opinion is strongly against this path (Foster, 2006; Richter et al., 2006). Residential care is more expensive, and particularly for infants and young children, long-term placement impacts negatively on a range child development outcomes in ways that cannot be reversed (Beckett et al., 2002; O'Connor et al., 2002). In addition, orphanages undermine traditional caregiving systems.

There has been a tendency in programming for children in communities affected by AIDS, to have a narrow psychological group and individual focus (e.g., bereavement work). While a limited number of children may need such intensive support, the vast majority will not. It is increasingly recognized that rather than these intensive program interventions, helping children to return to (or sustain) normal life functioning is crucial. This includes normalizing family functioning. As Richter et al. (2006) put it,

> Normalization involves helping a child feel safe in the context of their familiar surroundings and routines, receiving affection, nurturance and reassurance from supportive adults and older siblings, returning to school, and playing with friends. (p. 34)

And when traumatic events occur, such as the death of a parent, while care and support from familiar kin is essential rather than their becoming involved in quasi therapeutic sessions with unqualified people, "it is often best for young children's coping to be immersed in supportive day-to-day activities" (p. 35).

This section has not drawn on a strong randomized control trial or quasi experimental evidence base. They do not exist. Rather it links to what we know from tested interventions designed to support child development more generally in adverse circumstances. This knowledge has powerful relevance for this category of vulnerable children. Finally, early childhood centers can play a key role in provision of support to children affected by HIV and AIDS in their homes. South African initiatives seek to establish ECD sites as "nodes of support" for this group of children (Dawes, 2003). Affected children may face stigma and rejection from peers (and sometimes teachers). In poor households they may come to a preschool or community program without food; their progress may be affected by absences and poor concentration as a consequence of distress occasioned by losses, or their circumstances. There is no evidence as yet in South Africa for the success of interventions to support these children. However, the creation of caring early childhood environments would no doubt assist vulnerable children.

At the end of the day, *integrated* approaches that combine social, health, and material support to caregivers and families (and to schools and preschools) are needed to improve outcomes for young children affected by AIDS (Richter et al., 2006). The most effective way to do this is to strengthen the circle of care around the child wherever this occurs, whether this be the family, the school, or the clinical and social services.

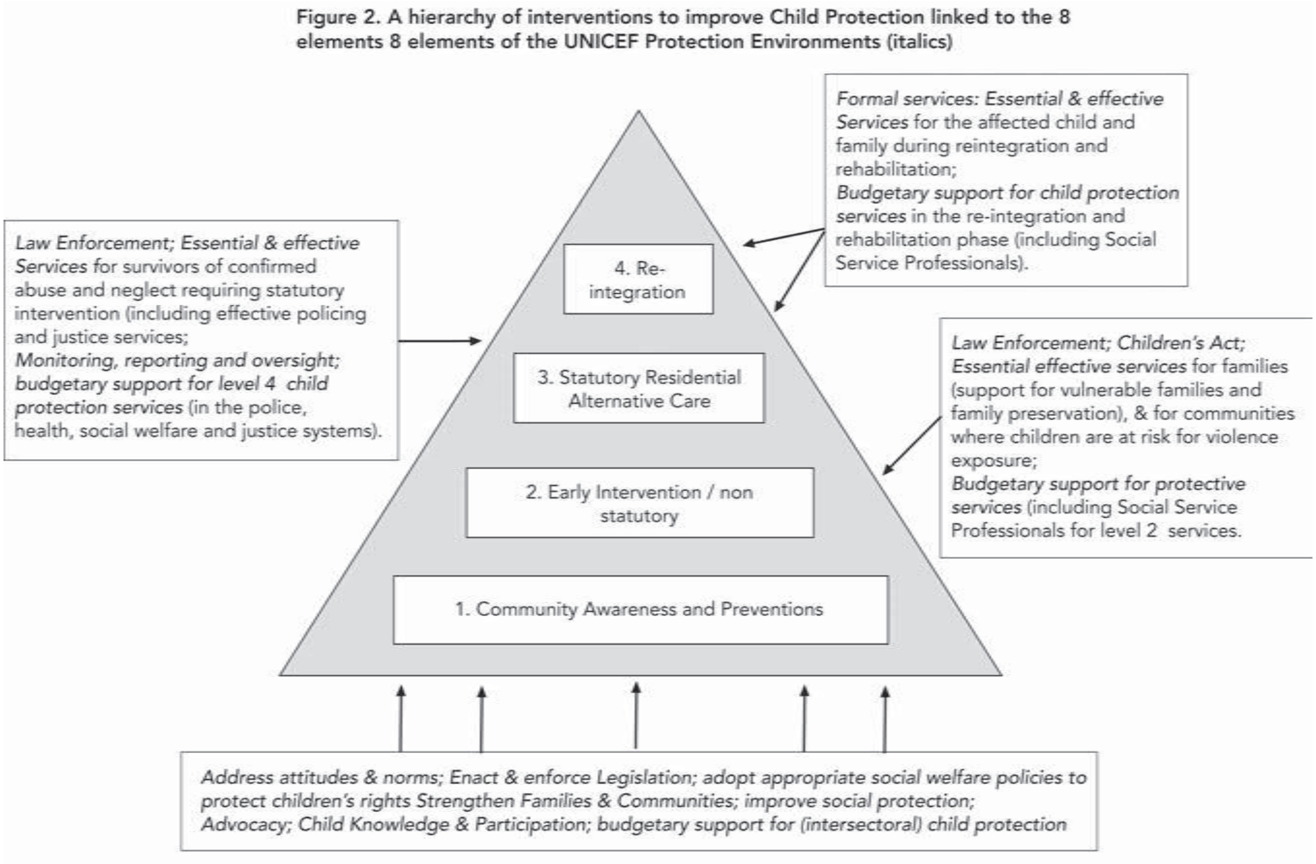
CHILD MALTREATMENT PREVENTION

According to the World Health Organization and ISPCAN (2006, p. 7), child maltreatment "refers to the physical and emotional mistreatment, sexual abuse, neglect and negligent treatment of children, as well as to their commercial or other exploitation."

As we have indicated, children in South Africa are significantly at risk for exposure to violence, maltreatment and neglect. Child protection services can be conceptualized as being delivered at the four levels of intervention shown in Figure 2.2.

The figure is informed by the approach to child protection developed by the World Health Organization and ISPCAN (2006), and UNICEF's formulation of a Protective Environment. Service intensity and specialization

Figure 2.2
A hierarchy of interventions to improve child protection linked to the eight elements of the UNICEF Protective Environment



increase as one moves toward the apex of the figure. This formulation is the basis of a Child Protection Plan developed for the Western Cape Province in South Africa developed by the first author of this chapter. It seeks to take account of very low service resources (less than half the social workers required for a minimal service) and an historic focus on services for children confirmed as maltreated.

The base of the pyramid includes initiatives to protect all children, the foundation being a policy and legislative framework that creates an environment in which the risk of exposure to violence, maltreatment, and abuse is reduced. The second level narrows the focus to interventions with children and families known to be at risk. At this level a key goal is to support vulnerable families and caregivers so as to inhibit family disintegration and reduce the risk that children will enter the formal child protection system (level 3 in Figure 2.2). Formal child protective services and reintegration form the highest levels of the service and are the most cost intensive (Barberton, 2006). As we have noted, South African and international evidence shows that young children are particularly vulnerable to maltreatment in the home (World Health Organization and ISPCAN, 2006; Dawes & Ward, 2008). Level 2 in Figure 2.1 is a particularly important level at which to provide services if child maltreatment is to be prevented.

Intervention studies in developed regions of the world indicate that maltreatment can be reduced and prevented through interventions at levels 1 and 2 of the model in Figure 2.2, by using home visiting and parenting training, both of which have been and are currently being evaluated (Prinz, Sanders, Shapiro, Whitaker, & Lutzker, 2009; Sanders, 2003; Centers for Disease Control and Prevention, 2004).

Home visiting programs designed to improve maternal sensitivity and reduce intrusive and coercive maternal behaviors toward infants has been shown by Olds et al. (1998) reduce the risk of maltreatment. This program requires considerable investment and professional involvement that are likely to be well beyond the means of countries such as South Africa which have very significant numbers of parents living in conditions that raise the risk of maltreatment and neglect.

There is no South African data (and none from other African countries) on effective interventions to reduce the risk of maltreatment in vulnerable families.

However, the first randomized trial to test the efficacy of a home visiting program delivered to women living in poor urban households in Cape Town has proven to be effective in increasing maternal sensitivity and reducing intrusive interactions. In addition, more children in the trial showed secure attachment than controls as a result of the intervention (Cooper et al., 2009). While maltreatment prevention was not a goal of this trial, improvements in maternal sensitivity and related behaviors would be likely to reduce this risk. One of the most promising aspects of the South African trial is that it was delivered in 16 sessions by women from the same community as the target population who had no specialist trailing. This is a much more affordable approach and more appropriate as a preventive intervention for a country with limited resources than the approach of Olds et al. (1998). The program is now regularly delivered by a Cape Town NGO, the Parent Center (http://www.parentcentre.org.za/), and is designed to operate at level 2 in Figure 2.1. It remains to be seen, however, whether an intervention such as the Cape Town trial would be efficacious in multiproblem families in which maltreatment has already been identified or appears to be a serious risk.

A pioneering South African program, the Perinatal Mental Health Project at the University of Cape Town, provides counseling support to depressed women in poor communities prior to and after giving birth (http://www.psychiatry.uct.ac.za/pmhp/). By the end of 2008, more than 5,000 pregnant women had been offered antenatal screening for psychological distress. Of those screened, 33% qualified for referral. Counseling services are provided to deal with problems ranging from the need for primary support such as social grants, to depression and other psychological problems. Clients attend two to three sessions on average and a limited postnatal follow-up is provided. The program remains to be evaluated, and measures of parent–child interaction are not currently undertaken. However, programs of this nature have the potential to deliver cost-effective preventive mental health services that benefit the mother, and which have the secondary effect of reducing the risk of poor early mother–child relationships that may be precursors of harsh, neglectful, or abusive parenting.

PROGRAMMING FOR EARLY CHILDHOOD COGNITIVE DEVELOPMENT IN THE YEARS BEFORE SCHOOL

Reviews of the available evidence indicate that the most effective interventions to improve young child development outcomes in vulnerable populations are those that are comprehensive and deliver a package of services such as nutrition, health care, parenting support, and direct child stimulation (e.g., Grantham-McGregor et al., 2007; Dawes, Biersteker, & Irvine, 2008). In this section we consider South African initiatives aimed at improving child cognitive outcomes with the aim of facilitating progress in the schooling system and building the basis for skilled participation in the labor market. However, the success of these will depend to a great extent on other services for children also being in place.

Provision of early childhood education services in South Africa is available through programs delivered directly to children in reception year classes and community-based ECD centers as well as through a small but growing number of home-based and community-based programs that focus on training parents to provide stimulation experiences that prepare children for the schooling system.

Increasing access and quality of center-based ECD services for under fives has received high level political recognition and increased budget resources over the last five years. This is largely based on arguments that draw a link between schooling outcomes and increased productivity in adulthood drawing on evidence from very well resourced interventions in North America. There is very little evidence on the impact of South African ECD programs. Only two small-scale unpublished outcome studies are available for South African formal ECD evaluations. The programs evaluated were NGO run and had a great deal of professional support as well as favorable teacher child ratios. Both found gains in child outcomes relevant to schooling following participation in high-quality, center-based programs compared with control groups (Herbst, 1996; Vinjevold, 1996). Short and Biersteker (1984) followed the scholastic performance of ECD center participants into adolescence and they performed above the average in their school population. There are no peer-reviewed studies (Biersteker & Dawes, 2008).

Efforts to improve the quality of ECD center draw on the accepted quality indicators in international practice, there is a focus on increasing the number of registered programs in order to ensure adherence to minimum norms and standards including parent involvement and an extensive public funded training program has been put in place to improve educational qualifications of practitioners. This goes hand in hand with a program to increase subsidies on a poverty targeted basis. A recent study of center quality however, indicates that these interventions are insufficient to guarantee more than a minimum level of care and stimulation (Department of Social Development Western Cape, 2010). The need for regular and appropriate on-site monitoring and support as well as attention to wages and service conditions for staff has been identified in several studies (e.g., Biersteker, 2008, 2009; Moll, 2007; Department of Social Development Western Cape, 2010).

Through the NIP for ECD (Departments of Education, Health, and Social Development, 2005) government has recognized that most young children will not attend an ECD center and announced a policy intention to support caregivers to provide stimulation at home and in informal community provision such as playgroups and parenting education programs. There are many examples of such programs in South Africa but while there is ample evidence that they can improve young children's access to health and social services and are valued by parents and other primary caregivers their impact on psychosocial outcomes has not yet been evaluated.

The international evidence base suggests that a number of essential conditions for improving psychosocial outcomes include two generational interventions (parent and child) over at least a year and on a frequent (at least weekly) and delivered by practitioners who are trained in appropriate skills for working with parents (Dawes et al., 2008; Evans, 2007). A rapid assessment and analysis of home- and community-based programs in South Africa (Biersteker, 2007) indicated that support to families was not offered as frequently or for as long as in successful programs in other countries. For example the Department of Social Development has developed a training package for an 11-session capacity building parents/primary caregivers to support young child development (Department of Social Development, 2008). A number of trainers located in NGOs and ECD representative structures were trained with the intention that they will in turn cascade this program and use it flexibly for their different constituencies as weekly sessions or as a block of training.

A first South African initiative to rigorously test the effects of different home- and center-based interventions on child cognitive and language outcomes as well as on service linkages and changes in the care environment began in 2008 and will be completed in 2011 (Dawes & Biersteker, 2009). Five NGOs have each developed an integrated area-based strategy. Components include the following:

- **Home-based programs** in changing parenting and other aspects of caregiver behavior that are associated with improvements in children's nutrition, protection, and development—in particular: motor, language, cognition, and socioemotional domains, and that link families to services for the benefit of the child
- **Center enrichment programs** (preschool and grade R) in improving site functioning, teacher practice, and children's psychological development; and in linking families to services (these interventions include governing body training)

- **Playgroup interventions** for children not in formal ECD in improving children's developmental outcomes and linking families to services
- **Advocacy** interventions with provincial and local authorities to improve access to services for the young child
- **School transition programs** that enable schools to be prepared for young children and for young children and families to be familiarized with the transition to school

CONCLUSIONS

South Africa is a middle income but very unequal society. More than 60% of children fall within the poorest 40% of the population. The risks to sound early child development and mental health are significant with the most important being the broad impact of poverty environments with associated malnutrition, HIV and AIDS (in both caregivers and young children), neglect and maltreatment, and an early environment that fails to provide the majority of children with the necessary learning and stimulation to prepare the child for school. As the majority will never be able to afford a preschool, home-based initiatives to improve the quality of care and stimulation received by the child are necessary. We still need to establish the most efficacious and cost-effective way to deliver such programs to scale.

Early preventive intervention in each of these areas is crucial if a sound platform for life is to be established, and it is essential that governments in countries such as South Africa commit significant resources to improving the situation of young children. The long-term returns on investment in the early years for human capital development have been amply demonstrated (Heckman, 2006).

NOTES

1. All figures provided by Statistics South Africa (http://www.statssa.gov.za/).

2. During the apartheid period prior to 1994, South Africans were classified as either white, black (belonging to an indigenous African ethnic group), colored (mixed-race descent), or Indian (descendents of indentured laborers brought from the Indian subcontinent during the late 19th and early 20th centuries). While these categories are still used in official statistics, we reject them as racist. For present purposes, we disaggregate in white and black (all three categories of persons of color).

3. The Gini coefficient is based on the income distribution and ranges in value from 0 (equality) to 1 (inequality).

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Chapter 3

A FAMILY DISEASE: MENTAL HEALTH OF CHILDREN ORPHANED BY AIDS AND LIVING WITH HIV+ CAREGIVERS

Lucie Cluver, Don Operario, Frances Gardner, and Mark E. Boyes

HIV/AIDS is a family disease. It impacts *all* members of the nuclear and extended family emotionally, financially, and through the pervasive stigma which accompanies HIV infection. Much of the care and responsibility for AIDS-affected people, and for their children, rests within the wider family. Families are also the focus of efforts to find solutions for the care of children who are infected or affected by HIV/AIDS. This chapter examines the mental health of parents and children living in HIV-infected families. We will focus on two main regions: sub-Saharan Africa and the United States. This is because (1) the great majority of available evidence comes from these two regions, and (2) these two regions are affected by the same disease but represent very different epidemics in very different social contexts. However, it is to be noted that the number of studies in the United States remains very small, and so comparisons between regions should be treated with caution.

In sub-Saharan Africa, HIV is largely transmitted through heterosexual contact, often within marriage (Hudson, 1996). Theories that aim to explain the massive spread of the epidemic in sub-Saharan Africa emphasize the effects of societal factors including labor migration, poverty, and gender inequality (Dunkle et al., 2004), which exacerbate behavioral and biomedical factors associated with HIV transmission. HIV prevalence rates for women in sub-Saharan antenatal clinics range from 12% in Zimbabwe to nearly 40% in Swaziland, and overall prevalence rates in adult populations (15- to 49-year-olds) are as high as 26% (see Table 3.1) (UNAIDS, 2008).

Table 3.1
Number of people living with HIV/AIDS and adult prevalence rates in a sample of sub-Saharan African countries

Country	*People living with HIV/AIDS*	*Adult (15–49) prevalence*
Botswana	300,000	23.9%
Kenya	1.5 to 2 million	7.1% to 8.5%
Lesotho	270,000	23.2%
Malawi	930,000	11.9%
Nigeria	2.6 million	3.1%
South Africa	5.7 million	18.1%
Swaziland	190,000	26.1%
Uganda	1 million	6.7%
Zambia	1.1 million	15.2%
Zimbabwe	1.3 million	15.3%

Note: Statistics taken from UNAIDS (2008) report on the global AIDS epidemic.

In South Africa, as in many other countries, black African and other impoverished groups are most severely affected by HIV.

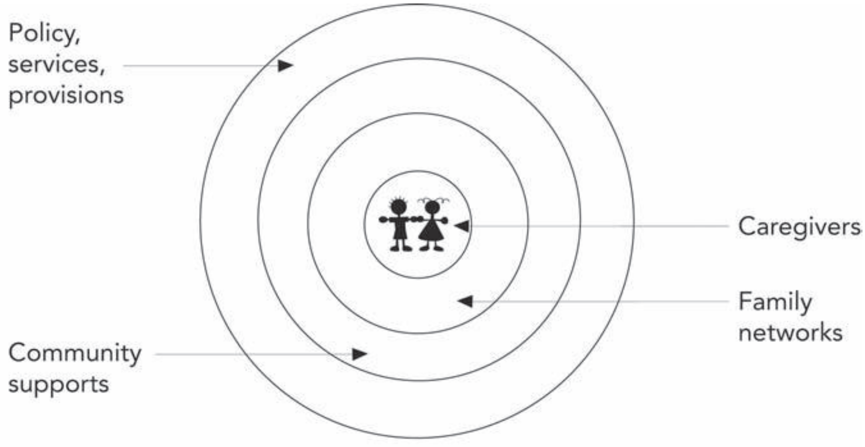
In the United States, the heterosexual epidemic again disproportionately affects specific ethnic groups, in particular African Americans and Latinos (Centers for Disease Control and Prevention, 2007). For example, in 2005 approximately 64% of all females living with HIV/AIDS in the United States were African American (Centers for Disease Control and Prevention, 2007). However, while heterosexual transmission remains a source of infection, other major sources of infection include transmission between men who have sex with men (MSM) (Centers for Disease Control and Prevention, 2007, 2009), intravenous drug use (Des Jarlais et al., 2005), and forced sex in prison (Springer & Altice, 2005). This means that many families in the United States are coping not only with HIV infection but also with a range of other associated social problems.

As of 2008, an estimated 20 million children worldwide had lost a parent to HIV/AIDS, and even with the expansion of antiretroviral treatment access by 2015 the number of orphaned children will still be overwhelmingly high. The vast majority of these children (approximately 12 million) live in sub-Saharan Africa (UNAIDS, 2008). In South Africa alone, 3.4 million children are parentally bereaved, with around 65% of deaths attributable to HIV/AIDS (Anderson & Phillips, 2006). In areas where antiretroviral treatment (ART; or highly active antiretroviral treatment, HAART) is available and accessible, parents are surviving longer and many are able to survive until their children reach adulthood. Far less is known about numbers of children who are living with an HIV+ parent or caregiver. To the best of our knowledge there are no available data revealing proportions of HIV-infected people who care for children, or the number of children living in HIV-affected families. We can estimate that these numbers are in the millions in countries with generalized epidemics, but further research is essential in order to identify this potentially vulnerable group. We also know very little about the proportion of children living with caregivers who are on ART medication, or the benefits for the health and well-being of these children, compared with those living with caregivers who are not.

Most children living with an HIV+ parent or caregiver are not themselves HIV+; however, a significant proportion of these children are. About 17% of new HIV infections annually are in children of up to 14 years of age (UNAIDS, 2008). Pooled analyses of data in sub-Saharan Africa studies indicate most of these infections occur through vertical transmission (Newell et al., 2004), although findings from South Africa highlight other routes of transmission including sexual abuse and infection in health facilities (Brookes, Shishana, & Richter, 2004). Importantly, research suggests that children who are HIV infected may experience distinct cognitive difficulties and mental health issues (Mellins, Brackis-Cott, Abrams, & Dolezal, 2006; Mellins et al., 2009), in addition to the effects of having an HIV+ or deceased parent. Additionally, the demographics of this group differ between countries in which antiretroviral treatment has been available at different times. For example, the United States has provided ART to perinatally infected infants since the mid-1990s (Havens, Mellins, & Hunter, 2002) and now has a cohort of HIV+ adolescents who are approaching adulthood (Bush-Parker, 2000). In contrast, Botswana began providing pediatric ART in January 2002, while South Africa only published a plan to provide pediatric ART in the public health care system in late 2003.

This chapter explores the evidence suggesting that familial HIV sickness and death impacts negatively on the mental health and well-being of both parents and children. Additionally, we briefly discuss the implications of this research for intervention strategies targeting children's needs. A broad framework that informs much of this chapter is Bronfenbrenner's ecological model (Bronfenbrenner, 1979). This model puts children at the center of multiple, interacting layers of influence (see Figure 3.1). Proximal to the child are relationships with caregivers and the everyday caregiving environment. More distal are school and community influences,

Figure 3.1
"Circles of care," an adaptation of Bronfenbrenner's ecological model



Source: Richter et al. (2006).

followed by wider political, policy, and cultural factors, which determine the context of child development. Key to this theoretical framework, and supported by research on risk and resilience (Luthar, Cicchetti, & Becker, 2000; Rutter, 2006), is the cumulative and counterbalancing effects of these risk and protective factors acting on each other, and on the child, as well as the effects of the child's initiatives acting on his or her external environment. From this perspective, the impacts of adversity in particular spheres of a child's life can be mitigated by positive factors in another sphere (Bronfenbrenner, 1979). Thus, while HIV is a family disease, it also necessitates a family response. Not only does the infection of one family member have multiple and long-term effects on all other family members, but it is also clear that the family are the primary source of care and support for AIDS-affected children. For children where family are unavailable, unwilling, or unable to provide care, support groups within the wider communities may need strengthening and support in sustaining care for HIV/AIDS-affected children.

MENTAL HEALTH IMPACTS

Any sickness or death within a family can have an impact on children's mental health and well-being. Studies of children whose mothers have cancer reveal that these children often experience emotional and behavioral difficulties, as well as fears of parental death (Forrest, Plumb, Ziebland, & Stein, 2006). In 2000, a review of the impact of parental death on mental health (although this review did not include HIV-related death) reported that emotional problems may manifest differently according to developmental age (Dowdney, 2000); for example bedwetting among younger children and depression and guilt among adolescents (Dowdney et al., 1999). This review also reported more internalizing problems (such as depression) among bereaved girls, while more externalizing (behavior) problems were reported among bereaved boys. Children's mental health is especially at risk in the context of traumatic parental death, such as suicide (Dowdney, 2000) or homicide (Black & Harris-Hendricks, 1992). Importantly, until the late 1990s, the vast majority of literature on child mental health in the context of parental illness or death was Western-focused and did not yet address AIDS-related death. However, the rapid spread of HIV and the subsequent rise in numbers of AIDS orphans has led to a new body of evidence, clustered in sub-Saharan Africa and the United States. In order to understand how familial HIV can affect childhood mental health, it is important to look at impacts on both the infected person in their caregiving role and on children themselves.

HIV/AIDS, Parents, and Parenting

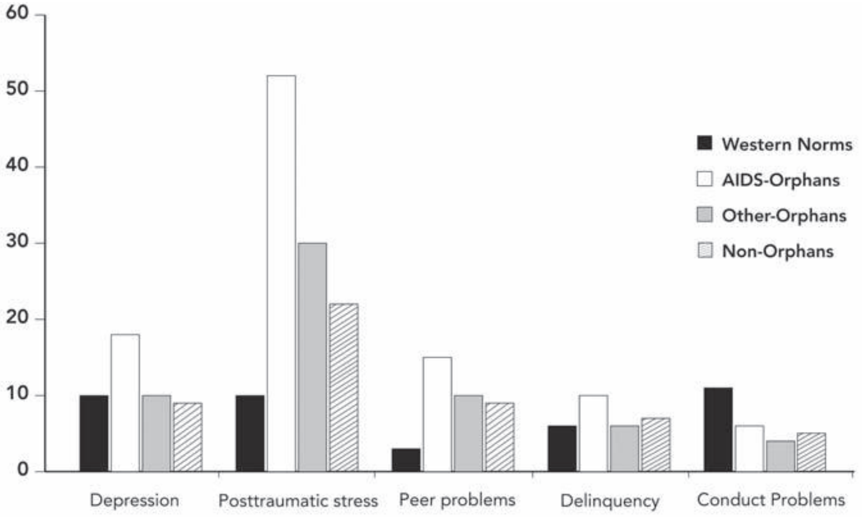
There is strong evidence suggesting that children's emotional well-being is closely connected to that of their parent or caregiver (Cluver, Gardner, & Operario, 2009; Stein, Ramchandani, & Murray, 2008). In Africa most HIV+ women are diagnosed during pregnancy. In rural South Africa women coming to terms with a serious illness report experiencing emotions of shock, grief, and fear, as well as motivational dilemmas regarding the unborn child (whom the parent is at risk of infecting) (Rochat et al., 2006). Enduring emotional problems have also been reported in HIV-infected mothers of young children in urban South Africa (Brandt, 2009). Similarly, high levels of depression and anxiety among HIV+ parents of adolescents have also been reported in the United States (Rotheram-Borus, Lightfoot, & Shen, 1999).

HIV infection can cause cognitive problems, even at early stages. At later stages of AIDS illness, people can experience severe mental illnesses such as AIDS-related dementia or psychotic symptoms (Antinori et al., 2007). These AIDS-related cognitive impairments or feelings of depression and anxiety may for some people impact on parenting. Additionally, for parents who have become infected through injection drug use or in prison (more likely to occur in the United States than in sub-Saharan Africa), there are likely to be other emotional and behavioral problems that can also affect children in their care. Parenting may also be made more difficult due to the stigma associated with HIV. The ongoing stigma of infection can reduce support systems, and HIV-infected parents also report ostracism and stigma when trying to access health care for themselves and their children (Green & Smith, 2004). Moreover, as parents experience increasing numbers of opportunistic infections, their own physical health problems can impact on parenting capacity. In addition, many HIV-infected caregivers are also caring for other infected family members, such as spouses, siblings, or children. Studies have revealed that parents are often preoccupied with worries about their and their children's HIV infection and health (Simoni, Davis, Drossman, & Weinberg, 2000). Finally, HIV/AIDS places incredible financial pressure on many families and poverty has been shown to impact on parenting, especially under stressful conditions (Aber, Jones, & Raver, 2007). Even where health care is free, AIDS illness often results in loss of earnings, and in sub-Saharan Africa the costs of AIDS treatment and funerals frequently result in deficits in children's nutrition and education (Booysen, 2002; Case & Ardington, 2005). While parenting is often a challenging experience, parenting with HIV (and in the contexts of stigma and poverty) may be even harder.

Orphaned Children

There is strong and remarkably consistent evidence (from both the United States and sub-Saharan Africa) that AIDS orphanhood impacts negatively on mental health and well-being. Contrary to early fears that orphans may be “unsocialized” and “potential rebels” (Barnett & Whiteside, 2002; Hunter, 1990), there is little empirical evidence of severe behavioral problems. However, multiple studies from sub-Saharan Africa reveal that AIDS orphanhood is associated with increased levels of emotional distress, particularly depression, anxiety and posttraumatic stress (see Figure 3.2 for an example) (Atwine, Cantor-Graae, & Bajunirwe, 2005; Bhargava, 2005; Cluver, Gardner, & Operario, 2007; Forehand et al., 1999; Makame, Ani, & McGregor, 2002; Nyamukapa et al., 2008). Recent data from China suggest similar emotional distress in Chinese AIDS orphans, but as yet these data lack comparisons with nonorphaned groups (Zhao et al., 2007). Furthermore, mental health impacts are not restricted to AIDS orphans. A recent large study and systematic review investigated caregivers of orphaned children (mainly grandparents) and found that these caregivers also reported heightened levels of depression and anxiety (Kuo & Operario, 2009a, 2009b). Similarly, qualitative studies have also reported

Figure 3.2
Proportions of children in range for clinical-level disorder in South Africa



Source: Cluver et al. (2007).

heightened distress among grandmothers caring for orphaned children, while also grieving for the death of their adult child (Ferreira, Keikelame, & Mosaval, 2001). Studies conducted in the United States report similar findings to those in Africa, although with additional evidence of behavioral problems among children with HIV+ parents (Forehand et al., 2002; Rotheram-Borus, Lee, Lin, & Lester, 2004). However, the extent to which these behavioral problems may be connected to other social problems in HIV-infected families in the United States—such as increased likelihood for poverty, parental incarceration, and parental substance use—is not known and future research should explore this issue.

Although the evidence for mental health impacts associated with orphanhood in high-HIV contexts seems clear, very few studies allow comparison of AIDS-orphaned children to other-orphaned children. One of the only large studies that did (Cluver, Fincham, & Seedat, 2009; Cluver et al., 2007; Cluver, Gardner, & Operario, 2008) found that AIDS orphanhood has stronger negative impacts on mental health than orphanhood by other causes (even homicide), as shown in Figure 3.2. However, there is very little longitudinal evidence to allow us to understand how the effects of AIDS orphanhood change over time. In the past two years, a small number of studies have suggested that orphanhood may be associated with an increased likelihood of HIV infection in later life. A recent review

(Cluver & Operario, 2008) found four studies worldwide that reported higher levels of HIV infection among adolescent orphans in Zimbabwe (Birdthistle et al., 2008; Gregson et al., 2005), South Africa (Operario, Pettifor, Cluver, MacPhail, & Rees, 2007) and Russia (Kissin et al., 2007). Further studies reported higher levels of sexual risk behavior (Campbell, Handa, Moroni, Odongo, & Palermo, 2008; Juma, Askew, & Ferguson, 2007; Nyamukapa et al., 2008; Operario et al., 2007; Palermo & Peterman, 2009; Thurman, Brown, Richter, Maharaj, & Magnani, 2006). While there may be varied causes of this higher risk, one study in Zimbabwe does suggest that mental health distress may be contributing to sexual risk behavior among orphans (Nyamukapa et al., 2008).

Children Living with AIDS-Sick and HIV+ Parents or Guardians

Orphanhood by HIV is not a single acute event, rather it is a process preceded by a parent's chronic and debilitating illness (Richter, Foster, & Sherr, 2006). This illness is also often a "family secret"; limiting children's scope to find support outside the family. Furthermore, actually informing children about a parent's HIV status is not simple. Many children report anger, fear and shock when a parent discloses that they have a life-threatening illness. A U.S. study found that children to whom their mothers had disclosed showed more behavioral problems after disclosure (Shaffer, Jones, Kotchick, Forehand, & Family Health Project Research Group, 2001). Despite this, it is generally agreed that disclosure to children is both helpful and necessary for long-term family coping.

Very little is known about the group of children living with HIV+ or AIDS-sick caregivers. In sub-Saharan Africa, studies of children in households with a sick adult do seem to show higher morbidity, malnutrition (Mishra, Arnold, Otieno, Cross, & Hong, 2007), and school absence (Gray et al., 2006), but these studies do not examine mental health. However, there is some evidence that risks to children's emotional well-being may be independently associated with caregiver sickness. For example, in South Africa, the extent of caregiver sickness was shown to mediate levels of mental health problems in uninfected children (Cluver, Gardner et al., 2009). Another small South African study reported higher levels of mental distress among children of parents with full-blown AIDS in comparison with those whose parents did not (Gwandure, 2007). Similarly, studies in the United States have reported that children of HIV-infected parents (particularly adolescents) also experience emotional and behavioral problems (Armistead & Forehand, 1995; Forehand, Armistead, Mose, Simon, & Clarl, 1998; Forehand et al., 2002; Hudis, 1995; Rotheram-Borus et al., 1999). Understanding the extent to which the mental health problems experienced by AIDS-orphaned children are established during the period of parental sickness is of the utmost importance and is an avenue for future research.

Young Carers

In the West, there is increasing advocacy and evidence to suggest that children who provide care at home for sick parents or siblings are at risk of mental health problems (Becker, 2007; Dearden & Becker, 2000; Levine et al., 2005). These children are often called "young carers" and include children looking after mentally ill, disabled, or substance-using parents. The tasks that these children engage in include household tasks, medical care, and providing emotional support. Due to general limitations in health services, it is likely that many children in sub-Saharan Africa who live with AIDS-unwell caregivers are acting as young carers (see Figure 3.3 for an example); however, there is very little research examining this potentially vulnerable group of children. In the context of the AIDS epidemic, there are no reliable data on the numbers or proportions of children providing such care or on the nature and extent of the tasks that they undertake (e.g., medical, intimate, or emotional care, and care of younger siblings) (Bauman et al., 2006).

One quantitative study (Bauman et al., 2006) compared 50 young carers of AIDS-sick parents in Zimbabwe to 50 young carers in the United States. Results revealed high levels of depression in both groups. Interestingly,

Figure 3.3
Picture and annotation by a young South African girl

"I take my mother to the clinic in a wheelbarrow. I bring her water when she is in bed" (Girl, 8, urban South Africa).

Source: Cluver and Orkin (2009).

mental health did not seem to be related to extent of caregiving done by children, but future studies with comparison groups of children in healthy homes or homes with other sickness may help to shed further light on this issue. In sub-Saharan Africa, very few studies (all of which are qualitative in nature) have explored children's perceptions of the impact of caregiving (Evans & Becker, 2009; Robson, 2000; Skovdal, Ogutu, Aoro, & Campbell, 2009). In these studies, children have reported both emotional distress and positive experiences and competencies associated with responsibility and contribution to the household. One large-scale, ongoing quantitative study is examining the impacts of being a young carer in the context of HIV/AIDS (Cluver, Kgankga, & Kuo, 2010).

HIV+ Children

Children living in AIDS-affected families may themselves also be infected with HIV. This section will only focus on children who have been infected perinatally (i.e., by an HIV+ parent at birth) as mental health issues may be different for children infected via abuse, drugs, injection drug use, infected blood, and consensual or forced sexual contact.

Before the introduction of pediatric antiretroviral medication, few perinatally infected children survived infancy (Newell et al., 2004). The limited evidence available shows risks of major developmental, motor and emotional delays due to the effect of the virus on the developing brain and nervous system (Richter, Stein, & Cluver, 2009). A recent review of HIV and mental health in sub-Saharan Africa (Jaros, Myer, & Joska, 2009) found nine studies of neurocognitive impacts of parental HIV but very few studies that look at children over two years old or at psychological impacts beyond motor skills and cognitive and neurological abnormalities. Those that did found that HIV+ children scored lower on the personality-social domain of the Denver scale (Boivin et al., 1995) and had less secure attachment to their mothers (Peterson, Drotar, Olness, Guay, & Kiziri Mayengo, 2001).

In the United States, antiretroviral medicine has been provided to infected children since the mid-1990s (Havens et al., 2002). In southern Africa, rollout of ART to infants and children has been far slower, and has been hampered by difficulties such as lack of pediatric dose tablets and complexities in administering suspension formulations. However, with increasing coverage and efficacy of infant and child antiretroviral medicine, it is possible to anticipate that this will be a substantial future demographic group for antiretroviral therapy. This pattern of ART provision in southern Africa, a number of years behind other regions, suggests that we can valuably look to the United States and Europe for indications of potential future challenges.

In the United States (particularly major cities such as New York), ARV provision to infants has resulted in a cohort that has been on antiretroviral medication since birth and are now moving into adolescence (Bush-Parker, 2000). These adolescents show high levels of mental health problems as they adjust to the reality of a chronic, highly stigmatized, parentally acquired disease (Mellins et al., 2006). In the light of this, there are increasing concerns regarding the negotiation of sexual relationships for this group, including disclosure to sexual partners and safe sex. Clinical observation and a small number of studies have noted that the process of adolescent assertion of independence and "acting out" may include rejection of and/or inconsistent use of medication (Mellins, Brackis-Cott, Dolezal, & Abrams, 2004). This may also be because of some of the side effects of ART medicines, such as the developing of fat deposits, make teenagers feel awkward and look different. It is extremely dangerous for children or young people to stop taking ART medication, take it irregularly, or miss doses. Not only do they immediately become more likely to get ill from AIDS-related illnesses, but by missing doses they can build up viral resistance, and the HIV virus becomes able to multiply despite the ARV medication.

It is unrealistic to presume that the difficulties for perinatally infected infants, children, and adolescents in southern Africa will be identical to those experienced by perinatally infected children in the United States. However, it may be useful to examine closely the experience of the developed world with this group, to attempt to learn lessons from this work, and put in place interventions based on this research. In particular, it may be important to develop early methods of communication to children regarding their HIV status and their antiretroviral use, as a major issue for HIV+ children in both sub-Saharan Africa and elsewhere is that of disclosure. Most children who have been infected with HIV at birth are not told of their HIV status until they are thought to be old enough to understand (and often to keep the family secret). Disclosure to children of their own HIV status often also means disclosure of the parent's HIV status. Research has revealed that disclosure to children of their own HIV status often causes anger toward the parent, resentment and fear, and can disrupt family life for some time. However, children agree that disclosure is important, and many have already guessed by the time they are told of their own HIV status (Armistead et al., 1999; Shaffer et al., 2001).

RISK AND PROTECTIVE FACTORS: DEVELOPING INTERVENTIONS

It is important to develop effective interventions in order to help communities cope with the effects of familial HIV on children's mental health. In order to do this, it is essential to understand the *mechanisms* through which having a caregiver with HIV impacts on child mental health and well-being. What is it about HIV infection, AIDS sickness, and death that render children especially vulnerable? Only a few studies specifically examine potential mechanisms through which parental HIV/AIDS illness influences children's mental health. There is also a lack, as yet, of longitudinal data that would allow stronger inferences to be made about causal relationships between risk and protective factors and child outcomes; having reasonable confidence in these causal paths is vital for program and policy design. While there are many programs and policies that aim to improve mental health for AIDS-affected children, very few of these have been empirically evaluated. In this section we will look at (1) potential mechanisms through which familial HIV may influence child well-being and (2) evidence for what can be effective in improving children's mental health outcomes.

Caregiver Sickness and Effects of HIV

To the best of our knowledge, no known studies have examined the effects of maternal HIV on parenting and childcare; however, two separate bodies of research suggest that HIV/AIDS may compromise parenting ability. Firstly, there is evidence that HIV diagnosis and illness is associated with depression and reduced social support (Stein et al., 2005) and secondly that infants are negatively affected by parental depression and reduced social support (Stein, Ramchanani, & Murray, 2008). Interestingly, one study in South Africa reported that the extent of caregiver illness positively predicted the level of mental health problems in children, but this group of caregivers included both AIDS-sick parents and elderly grandparents (Cluver, Gardner, et al., 2009). Caregiver sickness can limit parental attention, monitoring, and bonding between child and caregiver, thus raising the likelihood of mental health problems and risk behaviors in children.

AIDS-Exacerbated Poverty

As discussed previously, AIDS illness and death have direct and major implications for family poverty. In South Africa, lack of adequate nutrition, school nonattendance (due to financial reasons), and lack of access to social welfare grants were strong mediating factors of mental health problems in AIDS-orphaned children (Cluver & Orkin, 2009). We know far less about the effects of poverty on children living with HIV+ parents or on children who are themselves HIV+, although current research is beginning to address these issues. Children affected by AIDS-exacerbated poverty might be more prone to assume adult responsibilities—both within and outside the home—and experience premature exposure to adult behaviors including sexual risk taking. Indeed, four studies conducted in sub-Saharan Africa have found evidence for earlier sexual debut in orphaned adolescents (e.g., Operario et al., 2007; Thurman et al., 2006).

AIDS-Related Stigma

One of the strongest predictors of mental health problems among AIDS-orphaned children is AIDS-related stigma. A qualitative study in Scotland found that children of HIV+ parents were particularly hurt by people accusing their parents of being promiscuous or prostitutes (Strode & Barrett Grant, 2001). In South Africa, children reporting experience of AIDS-related stigma in the community show far higher levels of depression, peer problems and posttraumatic stress (Cluver et al., 2008). Stigma seems to be directed both at the HIV+ person, and at families of HIV+ people, and is often based on misguided fears of infection through socializing, sharing food or touching a person from an AIDS-affected family (Deacon, 2006; Nyblade, 2006; Strode & Barrett Grant, 2001).[1] We still know very little about how to reduce stigma and discrimination toward the families of HIV+ individuals. Reviews of strategies aiming to reduce stigma for HIV+ individuals suggest potential positive results of legal protection, availability of antiretroviral medication, sensitization and contact with HIV+ people (Brown, Macintyre, & Trujillo, 2003; Klein, Karchner, & O’Connell, 2002); however, to the best of our knowledge no studies have examined the effects of stigma reduction strategies on the *children* of HIV+ parents.

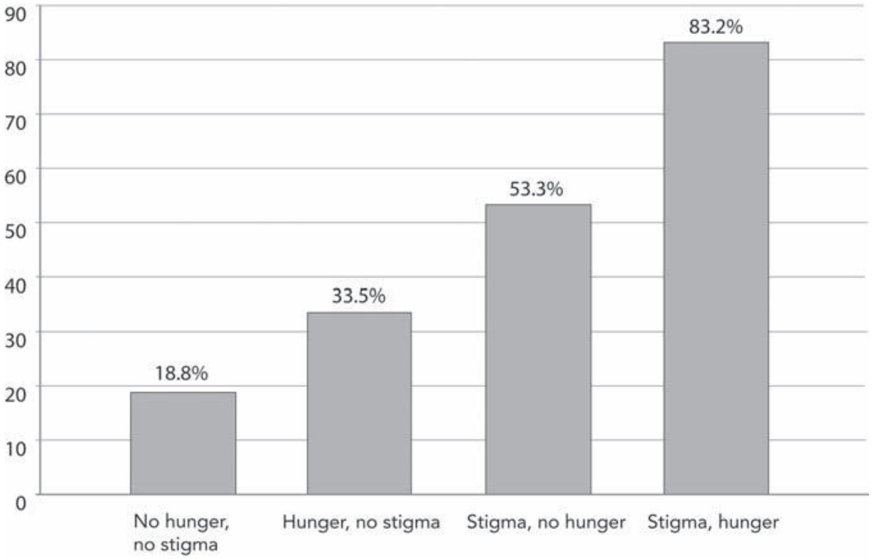
Cumulative Factors

Many theoretical models of child mental health use a “cumulative risk” approach (Rutter, 2000). This suggests that, while children can often cope with a single stressor, multiple stressors can interact to put children at risk of psychological distress. There is little available research to show whether this is true of AIDS-affected children, but a recent study demonstrates interactive and cumulative effects of AIDS-related stigma and undernutrition on orphaned children (Cluver & Orkin, 2009). Those with enough to eat and no stigma had a 19% likelihood of clinical-level disorder, while those experiencing both stigma and hunger had an 83% likelihood (see Figure 3.4). Better understanding of cumulative factors that contribute to mental health problems among AIDS-affected children can guide the specific timing and focus of interventions.

Interventions

There are very few rigorous evaluations of intervention programs designed to improve mental health among AIDS-affected children. In the United States, Rotheram-Borus and her colleagues have reported that a group-based psychological intervention that targets HIV+ parents and their children has long-term positive effects on children's mental health (Rotheram-Borus et al., 2006). Similarly, a recent study (Kumakech, Cantor-Graae, & Maling, 2009) showed positive mental health effects of therapeutic groups for AIDS-orphaned children. While most programs use a counseling or support group–based approach, to the best of our knowledge, there are no studies examining effects of reducing poverty and stigma, and supporting parenting for AIDS-sick parents, on children's

Figure 3.4
Clinical-level disorder among 1,200 children in South Africa



Source: Cluver and Orkin (2009).

mental health and well-being. However, non-HIV studies in other parts of the world suggest that these could have direct benefits on child emotional health (Aber et al., 2007). In other disadvantaged communities, carefully planned short-term psychosocial interventions during pregnancy and the postnatal period can result in long-term mental health benefits to children (Richter et al., 2009). A number of trials in non-HIV contexts have shown that school-based interventions can also be effective at improving social-emotional development in high and low income countries, and have the advantage of being potentially scalable and feasible in some resource-poor settings (Baker-Henningham, Walker, Powell, & Meeks-Gardner, 2009). Similarly, studies of the effects of child-focused cash transfers in other poor communities show long-term educational benefits, although mental health benefits are not tested (Paxson & Schady, 2007). Finally, the provision of antiretroviral medication to HIV+ parents has been shown to have effects on nutrition and growth of their uninfected children (Graff Zivin, Thirumurthy, & Goldstein, 2009), but effects on child mental health have not yet been examined. In the sub-Saharan African context of a generalized HIV epidemic with severe resource constraints, small-scale interventions may not be practical or may not have effects commensurate with the level of need. Policy makers, and increasingly the research community, are accepting that interventions are not sustainable on a large scale unless they are based in existing structures such as NGOs, and make use of existing capacity. However, the vast majority of provision to AIDS-affected children still lacks basic pre- and postmeasurements of outcome, let alone well-controlled evaluations, or evaluation of effects of interventions on key developmental outcomes.

SUMMARY

While there has been a growth in studies from sub-Saharan Africa on the impacts of parental HIV on children, almost all these studies come from a small set of countries—South Africa, Zimbabwe, and Uganda. There are substantial inadequacies in information from elsewhere in the region, as well as in areas of emerging epidemics such as India, China, and Eastern Europe.

From the evidence we do have, it is clear that HIV affects different communities in different ways; however, the impact of parental death by AIDS on children's mental health and well-being appears remarkably consistent across cultures. Children orphaned by AIDS are clearly at increased risk of emotional problems such as depression, anxiety, and post-traumatic stress disorder. However, whether these children are at greater risk than children orphaned by other means is still being investigated, although one large controlled study suggests that this is the case in South Africa (Cluver, Gardner, Operario, 2007). The risk of behavioral problems in AIDS orphans is less clear and based largely on data obtained in the United States. In contrast, very little is known about children living with HIV+ parents or guardians. Many of these children are likely to be "young carers" who are potentially highly vulnerable. This is a group that clearly warrants further investigation. We also know that children who are themselves HIV infected, may experience neurological difficulties, negative social effects (due to stigma associated with the disease), as well as emotional distress (perhaps related to disclosure).

At present the mechanisms through which familial HIV/AIDS impacts on children's mental health are not well understood. Studies suggest AIDS-related stigma, poverty, and caregiver illness may predict mental health outcomes; however further research is clearly needed to document this conclusively. In addition to studying risks, research on protective factors and psychosocial assets can help inform interventions to promote resilience and build on the strengths of children, families, and communities.

Additionally, the vast majority of intervention programs aiming to improve psychological health among AIDS-affected children have not yet been empirically evaluated. This should be a high priority for future research. There are a large number of NGO-led interventions which could valuably be assessed which, if effective, could inform future program design. Despite the extent and duration of the AIDS epidemic, we are still desperately in need of research to guide social policy and programming for children orphaned by AIDS or living with AIDS-sick parents.

NOTE

1. Until recently, there were no validated measures of experience of AIDS-related stigma for uninfected children. A measure has been developed in the United States (Mason, Berger, Ferrans, Sultzman, & Fendrich, 2010) and has been adapted and validated for southern Africa.

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Chapter 4

POSTNATAL DEPRESSION AND ITS EFFECTS ON CHILD DEVELOPMENT: A DEVELOPING WORLD PERSPECTIVE

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Depression is the most frequently occurring psychiatric condition among women of childbearing age, with more than 8% being affected at any given time (Weissman et al., 1988). Depression occurring among women specifically in the postnatal period has been the focus of a great deal of research in the developed world for a number of reasons. Postnatal depression is common, with prevalence rates estimated at around 10%–13% in developed countries (O'Hara & Swain, 1996). There is strong evidence from high-income countries to show that postnatal depression raises the risk of adverse outcomes for the mother and her partner, both in terms of the quality of their relationship and a raised risk for partner mental health problems (Boath, Pryce, & Cox, 1998); and family disturbances (Lovestone & Kumar, 1993). Postnatal depression is also associated with impairments in mother–infant interactions, as well as longer-term disruption of emotional and cognitive development of the infant (Murray, Halligan, & Cooper, 2009). An important finding from research in developed countries is that socioeconomic status is a key moderator of the effects of postnatal depression on parenting difficulties and subsequent child development. Thus, in poor economic environments, especially in the context of low levels of social support, parenting difficulties are more likely and the risk of negative child outcomes is raised (e.g., Stein et al., 2008). Until relatively recently, little research has been conducted on postnatal depression in developing and low- and middle-income contexts. The prevalence of socioeconomic adversity in these contexts is high, not only raising the risks for negative effects on children, but also raising the risks for maternal depression itself.

A scientific consensus is emerging that the origins of adult disease are frequently found among developmental and biological disturbances that occur in the early years of life (Shonkoff, Boyce, & McEwen, 2009). The extent to which early experiences are considered formative has been further underlined by the Marmot review (Marmot, 2010) which concludes that giving each child the best start in life is the highest priority for reducing health inequality. Thus, the rearing environment of young children has the potential to have effects on later health and development. In this chapter, we first review the prevalence rates of postnatal depression in developing countries. We then consider what is known about the impact of postnatal depression on children in developing contexts across the domains of physical and psychological development. We consider how the presence of HIV may impact on child development, indirectly by compromising maternal mental health, as well as through direct pathways. Finally, we review the small number of intervention studies conducted in this field. We conclude by considering priorities and strategies for intervention.

PREVALENCE

Although almost 90% of the world's children live in developing countries, far less is known about prevalence rates of postnatal depression (PND) in these countries in comparison to developed countries. However, existing evidence suggests that PND is common and is a substantial risk to child development (Walker et al., 2007). Epidemiological studies have found high rates of depression in developing countries, particularly among women facing socioeconomic difficulties (e.g., Husain, Creed, & Tomenson, 2000). Reliable estimates of the prevalence of postnatal depression in developing contexts are essential to the development of national and international health policies for intervention.

Studies on prevalence rates of depression specifically in the postnatal period in developing countries have found depression rates comparable to, if not significantly higher, than those in high income countries (see Figure 4.1). Different measures have been used to assess depressive disorder. As in the developed world, assessments using diagnostic clinical interviews provide lower estimates than those using screening questionnaires. Figure 4.2 provides a comparison (where available) between such interview and questionnaire measures across developing world countries. The majority of work to date has focused on prevalence rates in Asian

Figure 4.1
Mean prevalence of postnatal depression in developing countries

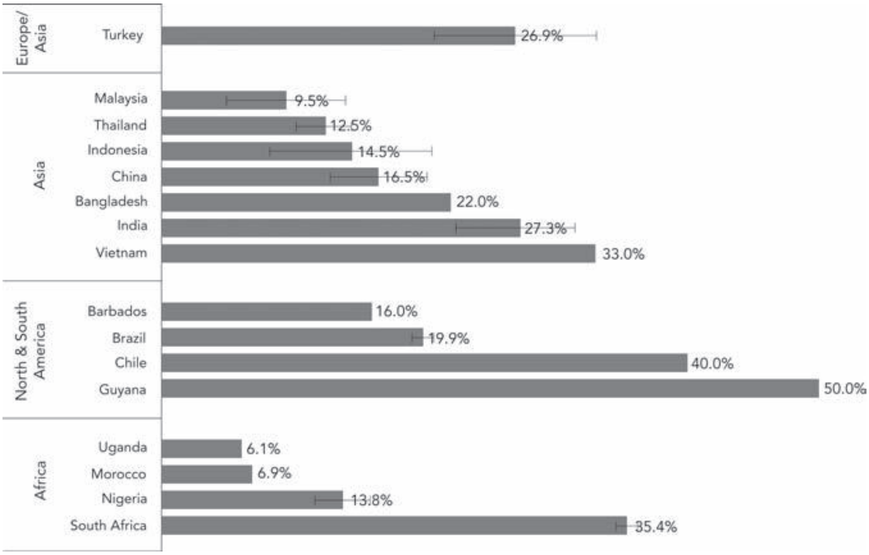
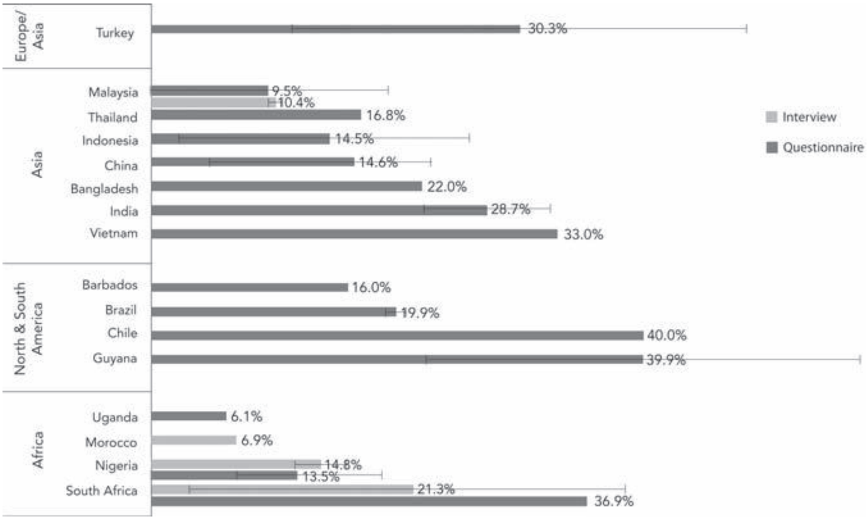


Figure 4.2
Mean prevalence of postnatal depression, comparing rates found using clinical interviews and self-report questionnaires



countries, with wide ranges in prevalence reported both within and between countries. In South Asia, estimates of prevalence in India have ranged between 19.8% and 35.5% (e.g., Chandran, Tharyan, Muliyil, & Abraham, 2002); in Pakistan between 28% and 36% (e.g., Husain et al., 2006); in Nepal between 4.9% and 12% (e.g., Ho-Yen, Bondevik, Eberhard-Gran, & Bjorvatn, 2006); and in Bangladesh the rate was estimated at 22% (Gausia, Fisher, Ali, & Oosthuizen, 2009). Similar estimates have been found in Southeast Asia, with prevalence in Vietnam reported at 33% (Fisher, Morrow, Ngoc, & Anh, 2004), in Malaysia between 3.9% and 28.1% (e.g., Mahmud, Shariff, & Yaacob, 2002), in Thailand between 10% and 16.8% (e.g., Liabsuetrakul, Vittayanont, & Pitanupong, 2007), and in Indonesia between 6.6% and 22.4% (e.g., Andajani-Sutjahjo, Manderson, & Astbury, 2007). In the rest of Asia, prevalence in China has been estimated between 7.2% and 25% (e.g., Wang, Jiang, Jan, & Chen, 2003), in Mongolia at 9.1% (Pollock, Manaseki-Holland, & Patel, 2009), and in Lebanon at 21% (Chaaya et al., 2002).

In Africa, a wide range of prevalence ranges have also been reported, with no clear differences between northern and sub-Saharan African countries. In the north, prevalence of postnatal depression in Burkina Faso was estimated at 44% (Baggaley et al., 2007), between 5.6% and 20.1% in Morocco (Agoub, Moussaoui, & Battas, 2005), and between 3.2% and 6.9% in The Gambia (Coleman, Morison, Paine, Powell, & Walraven, 2006). In sub-Saharan regions, prevalence in Ethiopia has been estimated between 13% and 37.1% (e.g., Tesfaye, Hanlon, Wondimagegn, & Alem, 2010), in South Africa between 7.8% and 36.9% (Lawrie, Hofmeyr, De Jager, & Berk, 1998), in Nigeria between 3.7% and 23% (e.g., Owoeye, Aina, & Morakinyo, 2006), between 6.1% and 16% in Uganda (e.g., Nakku, Nakasi, & Mirembe, 2006), at 16% in Zimbabwe (Nhiwatiwa, Patel, & Acuda, 1998), and at 13.9% in Malawi (Stewart et al., 2010).

Prevalence studies both in South America and in Turkey have reported even wider estimate ranges within countries. In Turkey, estimates range from 14% to 50.7% (e.g., Kirpinar, Gozum, & Pasinliolu, 2010); in Chile, from 10.2% to 50% (e.g., Florenzano et al., 2002), in Brazil from 11.4% to 56% (e.g., Surkan, Kawachi, Ryan et al., 2008), and in Guyana from 24.6% to 57% (Affonso, De, Horowitz, & Mayberry, 2000). In Central America, estimates for Costa Rican women have been between 34% and 46% (Wolf, De Andraca, & Lozoff, 2002), and for Barbadian women, 16% (Galler, Harrison, Biggs, Ramsey, & Forde, 1999).

As mentioned earlier, at least part of the variation in prevalence estimates within and across countries may be related to the different screening tools, postnatal stage, and cutoff scores used in these studies. The Edinburgh Postnatal Depression Scale (EPDS) is the most extensively used measure for PND across a wide variety of countries and languages, but other studies have employed structured psychiatric interviews (e.g., Structured Clinical Interview for DSM-IV; SCID), or a range of self-report scales including the Beck Depression Inventory (BDI), revised Clinical Interview Schedule (CIS-R), the WHO self-reporting questionnaire (SRQ), the Centre for Epidemiological Studies depression scale (CES-D), the Mini International Neuropsychiatric Interview (MINI), the Hamilton Depression Rating Scale (HDRS), Zung's self-rating depression scale, and the Kessler scales. These different scales appear to result in quite different estimates, even for the same women at the same time point. For instance, one study in India reported a prevalence of 24.5% using the BDI and 32.4% using the EPDS (Affonso et al., 2000). Similarly, variation of 29.1% in prevalence rates has also been reported when using the DSM-IV criteria compared with the EPDS in a sample in South Africa (Lawrie et al., 1998). The most widely used and stringent cutoff point for the EPDS is above 12. At this cutoff, studies have still reported high prevalence rates (e.g., 50% in Turkey; Alkar & Gencoz, 2005). Other studies have used lower cutoff points, such as scores of greater than 10 and have reported lower prevalence rates (e.g., 22% in Bangladesh; Gausia et al., 2009). There is a clear need for a consensus on best practice cutoff scores and scales if reliable estimates of prevalence are to be obtained.

RISK FACTORS FOR POSTNATAL DEPRESSION

Four systematic reviews have identified the following risk factors for postnatal depression in developed countries: history of any psychopathology (including history of previous PND), a lack of social support, poor marital or partner relationship, and recent negative life events (Beck, 1996; O'Hara & Swain, 1996; Robertson, Grace, Wallington, & Stewart, 2004; Wilson et al., 1996). There is also a raised risk of PND among immigrant populations (Glasser et al., 1998).

While poverty and economic adversity are associated with maternal PND in both developed and developing countries, developing countries are characterized by higher rates of poverty and economic stress than elsewhere. The relatively high prevalence of maternal PND in developing countries may be a result of women's exposure to such risk factors for depression (Broadhead & Abas, 1998) as socioeconomic hardship, and especially in sub-Saharan Africa, the high prevalence of HIV/AIDS (Stein et al., 2005). Furthermore, gender inequalities may be relevant in some areas. For example, research from India has found that disappointment with the birth of a female child is associated with the development of postnatal depression (Chandran, Tharyan, Muliyil, & Abraham, 2002). High rates of postnatal depression in developing countries may also reflect the lack of protective factors that can buffer against the onset of depression. For example, while better educated women are less likely to become depressed than poorly educated women (e.g., Husain et al., 2000), gender inequalities in secondary education are typical in many developing countries.

IMPACT OF POSTNATAL DEPRESSION ON CHILD DEVELOPMENT

In developing countries, carers, particularly the mother, play a critical role in child survival and development. The environment in which mothers provide caregiving is typically more adverse than in developed countries, with mothers daily facing great physical burdens. Overcrowding, a lack of running water or electricity and poor sanitation are common. In these circumstances, in addition to initiating and maintaining exclusive breast-feeding until six months, mothers have to manage weaning, hygiene, water sanitation, and ensuring the child is immunized. If the child becomes unwell, the mother needs to recognize the illness, provide care, obtain external help, and carry out treatment. Clearly, the mother's mental health may play an important role in how well she is able to perform these caregiving behaviors. For example, depression is typically characterized by poor concentration, lethargy, sleep disturbance and low mood, all of which could interfere with a mother's capacity to carry out these tasks.

Until recently, most research on the impact of postnatal depression on child development has derived from populations in developed countries. In this section, we examine whether postnatal depression is associated with disturbances in child health and development in developing world contexts. In developed countries, there has been considerable research on the impact of maternal depression on infant psychological rather than physical development, whereas the reverse is true for developing countries, because physical development is such a major concern.

Infant Physical Health

The best global indicator of a child's well-being is growth, because infections, a lack of food or unsatisfactory feeding practices, or more frequently a combination of these, are principal factors affecting physical growth and cognitive development. A child's body responds to poor nutrition in a number of ways that can be measured using growth indices. Wasting is a short-term response to inadequate nutritional intake and is measured by weight relative to length/height. Stunting is a longer-term response that reflects a deceleration or cessation of growth measured by length/height relative to age. Wasting and stunting therefore discriminate between different processes. Wasting is considered to be the index of choice for severely malnourished children who may be at raised risk of death. Stunting is thought to best reflect the long-term cumulative effects resulting from inadequate diet and/or recurrent illness. A third widely used growth index, weight for age, can reflect either stunting and/or wasting, and therefore does not discriminate between short and longer-term forms of poor nutrition. There is strong evidence that poor growth is associated with impaired cognitive development and deficits in school performance and intellectual achievement (e.g., Grantham-McGregor et al., 2007). Growth impairment in early childhood is also associated with significant functional impairment in adult life (World Health Organization, 1995).

Poor child growth is a major public health problem in developing countries. It has been estimated that more than 220 million children aged less than five years in developing countries have substantially impaired growth (UNICEF, 1998). Recent estimates suggest that stunting, wasting and intrauterine growth restriction are the cause of 2.2 million deaths and 21% of disability-adjusted life years lost among children less than five years old (Black et al., 2008), per annum. Physical development of infants is a particular problem in Asia. In what is referred to as the "Asian enigma," the nutritional status of children in South Asia has been found to be poorer than those of children in Africa, despite comparable economic conditions (Bamalingaswami, Jonsson, & Rohde, 1996). Determinants of the disproportionately higher rates of child undernutrition in this largely food-sufficient area are not well understood. Evidence appears to indicate that as the amount of food available per person increases, its power to reduce child malnutrition weakens (Smith & Haddad, 2000). Consequently, attention has gradually been turning to factors other than nutritional intake, such as maternal behavior and health and sociocultural practices, which may influence child health and development.

A number of recent studies have examined whether maternal depressive symptoms are associated with child nutritional outcomes as indexed by inadequate growth. Overall, findings from these studies have been mixed, with strong associations reported in some regions but not others. Three published studies to date have examined the predictive relationship between maternal mental health problems during pregnancy and child physical outcomes, all based in South Asia. One study of mothers in rural Pakistan found that depressive symptoms during pregnancy were predictive of low birth weight status (Rahman, Bunn, Lovel, & Creed, 2007a). A second study in Pakistan found that prenatal depression in mothers predicted poorer growth outcomes in infants at 2, 6, and 12 months with poorest outcomes for those infants of mothers with persistent depression (Rahman, Iqbal, Bunn, Lovel, & Harrington, 2004). In this study, postnatal depression was also found to have an independent effect on growth outcomes. A third study in India found an association between more broadly defined maternal psychological morbidity and low birth weight (Patel & Prince, 2006). It is interesting that evidence from developed countries for an effect of depressive symptoms during pregnancy on birth weight has been conflicting (e.g., Evans, Heron, Patel, & Wiles, 2007; Field et al., 2004). However, if such an association does exist in developing countries, these infants may be especially vulnerable because low birth weight is itself a risk factor for adverse outcomes; furthermore prenatal maternal depression increases the risk for postpartum depression (Dennis, Janssen, & Singer, 2004), which itself is associated with compromised child development.

Several recent studies from South Asia have reported an association between maternal postnatal depression and concurrent measures of child growth. In a cohort study in Goa, India, postnatal depression between six and eight weeks was an independent predictor of concurrent low weight and length for age (Patel, DeSouza, & Rodrigues, 2003). A study in rural India produced similar findings: infants between 6 and 12 months who were underweight or stunted were more likely to have a mother with depression than infants with normal weight (Anoop, Saravanan, Joseph, Cherian, & Jacob, 2004). In Bangladesh, infants of mothers with high levels of depressive symptoms were more likely to be stunted at 6 and 12 months of age (Black, Baqui, Zaman, Arifeen, & Black, 2009). In Pakistan, one study reported that underweight nine-month-old infants were significantly more likely to have a mother with high levels of distress (defined by the WHO SRQ) than infants of normal weight (Rahman, Lovel, Bunn, Iqbal, & Harrington, 2004). A cross-sectional study in both India and Vietnam found that maternal common mental disorder, as measured by the SRQ, was associated with greater likelihood of stunting and underweight status in infants aged between 6 and 18 months (Harpham, Huttly, De Silva, & Abramsky, 2005).

The association between maternal depressive symptoms and poor infant physical growth has been reported in some countries beyond South Asia but not others. In Jamaica, mothers of infants aged between 9 and

30 months with impaired physical growth (stunting, wasting and underweight status) had more depressive symptoms than mothers of healthy infants (Baker-Henningham, Powell, Walker, & Grantham-McGregor, 2003). However, when socioeconomic status was taken into account, there was no independent relationship between psychosocial function of the mother and the infant's growth status. In one of the earliest studies of its kind conducted in Brazil, the mothers of underweight infants aged less than two years were more likely to have a mental disturbance than mothers of healthy children (De Miranda et al., 1996). More recent studies of Brazilian mother–infant dyads also found an association between maternal depressive symptoms and child growth measures, but the pattern of the relationship was somewhat different; maternal depressive symptoms were associated with stunting in infants aged between 6 and 24 months, but overweight rather than underweight status (Surkan, Kawachi, & Peterson, 2008). A study in Peru found no association between maternal common mental disorder and stunting or weight for age (Harpham et al., 2005).

Findings from sub-Saharan Africa have differed from country to country, with some studies reporting an association and others not. In a longitudinal study in Nigeria, infants of mothers with depression at 6 weeks after birth had significantly poorer growth compared with infants of healthy mothers, as measured by weight for age and stunting, at 3 and 6 months, but not at 6 weeks and 9 months (Adewuya, Ola, Aloba, Mapayi, & Okeniyi, 2008). In Malawi, infants of mothers with common mental disorder were more likely to be stunted, but not underweight, than infants with healthy mothers at 9 months of age (Stewart et al., 2008). One study in South Africa found no clear relationship between maternal depressive symptoms and infant stunting or weight for age (Tomlinson, Cooper, Stein, Swartz, & Molteno, 2006). Two very recent studies have examined this issue. A study from Ethiopia found no association between maternal common mental disorder and infant underweight status or infant stunting (Medhin et al., 2010). On the other hand, the birth to 20 longitudinal study in Soweto-Johannesburg in South Africa found that postnatal depression was associated with stunting at two years of age, and that stunting mediated the negative effect of postnatal depression on behavior problems (Avan, Ramchandani, Richter, Norris, & Stein, 2010).

It is unclear why maternal depression appears to be related to infant growth in some countries but not others. As indicated earlier, the most robust evidence base for an association between depressive symptoms and impaired growth comes from South Asia. Across countries and cultures, there are considerably different psychosocial experiences associated with the birth of a child, such as in the rates of lone motherhood, the nature of marriage, family and kinship, and variations in the support new mothers receive. It may be that socioeconomic and sociocultural factors interact in determining the effect of maternal mental health on child nutrition. It has been argued that South Asian women have a poorer social status and are less empowered than women elsewhere (Harpham et al., 2005). In such a context, a mother with depression may find it more difficult to secure appropriate nutrition for her infant. In South Asia, infant gender (having a girl) has been shown to be a powerful determinant of maternal mental health difficulties (Patel et al., 2003), which does not appear to be the case in Africa. Other possible reasons include different breast-feeding practices and maternal nutrition, or other social and genetic factors. Further studies are necessary to determine whether antenatal depression has an impact upon birth weight in sub-Saharan Africa and other developing countries and whether this has an impact upon subsequent measures of infant growth. There are several possible mechanisms through which maternal depressive symptoms could be linked to impaired fetal and infant growth including, maternal undernutrition and poor self-care (Rahman, Harrington, & Bunn, 2002), disruption to mother–infant interactions (Cooper et al., 1999), increased rates of infant diarrhea (Rahman, Bunn, Lovel, & Creed, 2007b), and early termination of breast-feeding (Henderson, Evans, Straton, Priest, & Hagan, 2003).

Breast-Feeding

The Global Strategy on Infant and Young Child Feeding recommends, as a critical public health measure, that all infants are breast-fed exclusively up until 6 months of age and that breast-feeding continues with the introduction of appropriate foods up to two years and beyond (World Health Organization, 2003). This recommendation is especially important for developing contexts where the protective effects of breast-feeding are more evident than in developed countries (Cattaneo & Quintero-Romero, 2006). In developed countries, there is strong evidence linking postnatal depression with premature cessation of breast-feeding or suboptimal breast-feeding practices (e.g., Cooper, Murray, & Stein, 1993). Consistent with this, depressive symptoms have been associated with premature cessation of breast-feeding across a number of studies in developing countries. Mothers with depressive symptoms in the first four to six weeks postpartum were likely to stop breast-feeding earlier than nondepressed mothers, both in Nigeria (Adewuya et al., 2008) and in Brazil (Falceto, Giugliani, & Fernandes, 2004). Mood at seven weeks predicted Barbadian mothers' current and future preference for breast-feeding, as well as actual feeding behavior at six months (Galler, Harrison, Ramsey, Chawla, & Taylor, 2006). In Pakistan, the prevalence of depression was higher in a group of mothers who had stopped breast-feeding early than in a group of mothers who continued to breast-feed (Taj & Sikander, 2003). However, two studies have found similar rates of breast-feeding before four months in mothers with and without depression in Brazil (Falceto et al., 2004) and Turkey (Kara, Ünalan, Çifçili, Cebeci, & Sarper, 2008), suggesting that depressive symptoms do not necessarily disrupt breast-feeding. Again, the reasons for the association between maternal depression and breast-feeding duration are unclear, but are likely to be multifactorial.

Diarrhea

Diarrhea is another major public health concern in developing countries. Annually, it kills in the region of 2.2 million people, the majority of whom are infants or young children (World Health Organization, 2000). Preventing diarrhea in infants requires the caregiver, typically the mother, to take sanitation measures and be alert and responsive in the challenging environment of a poor community. Two studies have reported an association between maternal depressive symptoms and infant diarrheal episodes. Infants of depressed mothers had significantly higher rates of diarrhea per year than those of healthy mothers in Pakistan (Rahman et al., 2007b) and in Nigeria, where the infants also had higher rates of other childhood illnesses (Adewuya et al., 2008). However, the link between preventable illnesses such as diarrhea and maternal depressive symptoms requires further investigation. In the regions where this effect has been found, other studies have reported an effect of maternal depressive symptoms on infant physical growth, an effect not found elsewhere (e.g., Tomlinson et al., 2006). Again, there may be sociocultural or environmental factors specific to these regions, or an interaction of these factors that may account for the association.

Cognitive and Emotional Development

Findings from a diverse range of studies in developed countries suggest that postnatal depression, especially if chronic, poses a risk for long-term poor cognitive functioning in the child, particularly in the context of wider socioeconomic difficulties (Murray et al., 2009). While the vast majority of work on the impact of postnatal depression on infant cognitive development has been conducted in high-income settings, there is emerging evidence for an effect in at least some developing countries. In

India, Patel et al. (2003) found that the six-month-old infants of mothers who had postnatal depression at six weeks had significantly lower mental, but not motor, quotient scores, than infants of nondepressed mothers. A study of mothers in Barbados similarly found that postnatal depression at seven weeks predicted lower infant social and cognitive performance at 6 months (Galler, Harrison, Ramsey, Forde, & Butler, 2000). Finally, in Ethiopia, maternal symptoms of mental disorders were negatively associated with their children's scores on personal–social, fine motor, gross motor, and overall development between 3 and 24 months, but not their language scores (Hadley, Tegegn, Tessema, Asefa, & Galea, 2008). The limited number of studies in developing contexts precludes conclusions about the impact of postnatal depression on cognitive development, but given that socioeconomic hardship appears to moderate the impact of maternal depression on infant cognitive development, further studies in this area are clearly warranted.

The capacity of parents to provide the kind of care that promotes secure infant attachment and good psychological developmental in childhood can be compromised in adverse conditions such as poverty, especially in the context of maternal postnatal depression (e.g., Atkinson et al., 2000). This is of particular concern for populations in developing countries. Nonetheless, few studies have examined the emotional and behavioral development of children in the context of postnatal depression in developing countries. One study in South Africa found marked impairments in interactions between dyads where the mother had depression compared with healthy mothers (Cooper et al., 1999). A follow-up study found that these early parenting difficulties were associated with subsequent insecure infant attachment (Tomlinson, Cooper, & Murray, 2005).

HIV, MATERNAL DEPRESSION, AND INFANT OUTCOMES

Although it is increasingly recognized that Asia and parts of Eastern Europe are facing a major HIV problem, the HIV pandemic has been particularly devastating in sub-Saharan Africa where two thirds of the infected people live, and where widespread poverty and poor nutrition already undermine children's health and well-being. Half of the new infections in 2005 occurred in the 15–24 age group, the next generation of parents. In some parts of sub-Saharan Africa up to 50% of women attending antenatal clinics are HIV positive. There is now a body of evidence that indicates that even uninfected children of HIV positive mothers are at increased risk in terms of development (Stein et al., 2005). There is concern that receiving a diagnosis of HIV will impact on the mother's caregiving capacity and that one of the ways that this occurs is because of the effect on her mental state. Thus, being diagnosed with HIV during pregnancy, when most African women learn of their diagnosis, often leads to depression and even suicidal feelings (Rochat et al., 2006). While preparing to bring a new life into the world, the mother is, at the same time, confronted with the prospect of a chronic and potentially fatal illness. Questions hang over the fidelity of her relationships and her future fertility. In addition, the high levels of stigma associated with HIV often disrupt her social and material support networks (e.g., Kwalombota, 2002). The combination of being diagnosed with HIV and being depressed is likely to put particular pressure on a new mother and her parenting and may well have cumulative negative effects on mother–child interaction and the child's development (Stein et al., 2005). While some studies have shown that HIV infection is associated with disturbances in mother–infant interactions (e.g., Kotchick et al., 1997), it is not clear whether this is related to the impact of maternal psychosocial functioning or other factors.

Mediating Mechanisms

There are a number of potential environmental mechanisms through which postnatal depression can adversely affect child outcome. Research primarily from developed countries has shown that depression compromises the quality of the mother's caregiving, and suggests that disturbances in parenting are key mechanisms by which maternal depression affects child development (Murray et al., 2009). There are several related, partially overlapping, dimensions of parenting that have been identified as significant: notably, the missing of infant cues, lack of contingent responsiveness, intrusiveness, and poor facilitation, as well as low parental mood itself (e.g., Stein et al., 1991). Some evidence exists to suggest that in the developing world also, major depression in the postnatal period can have a negative impact upon mother–infant interactions (Cooper et al., 1999), which in turn are related to negative outcomes in infant attachment security (Tomlinson et al., 2005), poor hygiene, gastrointestinal infections and diarrhea. Notably, infants of depressed mothers were less likely to be fully immunized at 12 months compared with infants of nondepressed mothers in Pakistan, possibly indicating a lack of appropriate health-seeking behavior in depressed mothers (Rahman, Iqbal et al., 2004).

Interventions

The question that most urgently needs to be addressed is what can be done to help women and their children, and in particular, what intervention strategies are necessary to minimize the impact of maternal depression? Interventions in the developed world (not in the context of depression) have been successful in effecting improvements in mother–infant interactions and infant attachment when addressing difficulties in parenting behaviors (Bakermans-Kranenburg, Van Ijzendoorn, & Juffer, 2003). It has, however, become clear that interventions principally directed at improving mother–infant interactions do not necessarily lead to improvements in maternal depression (Nylen, Moran, Franklin, & O'Hara, 2006), and treating maternal depression alone does not lead to improvements in child outcome (Forman et al., 2007). An additional concern is that health care resources are limited in the developing world, and consequently, interventions that capitalize upon locally available resources are a priority.

Several randomized controlled trials (RCTs) in developing contexts have demonstrated that psychological interventions delivered by local health workers may be helpful in reducing maternal depression and may have a positive impact upon some aspects of child development. In a large-scale RCT in rural Pakistan, a perinatal cognitive behavioral program delivered by primary care health workers, compared to enhanced usual care, halved rates of maternal depression (Rahman, Malik, Sikander, Roberts, & Creed, 2008). A reduction in maternal reports of rates of diarrhea and higher rates of completed courses of immunization were found, but no overall difference in infant growth. In an RCT in South Africa, examining an intervention specifically focused on the mother–infant relationship, Cooper et al. (2009) found a significant positive impact of their intervention, delivered by trained local women, on the quality of the mother–infant interactions and on security of infant attachment. No significant impact on maternal depressive disorder was found.

In another RCT conducted in Jamaica of a more general intervention targeting child rearing and parenting self-esteem, improvements were found in both maternal depressive symptoms (as measured by the CES-D) and infant global development in the treatment compared with the control group who received standard care (Baker-Henningham, Powell, Walker, & Grantham-McGregor, 2005). Again, the intervention was delivered by local community workers who were specifically trained. In India, community "participatory learning and action" groups, focused on education and maternal and newborn health practices led to a significant reduction in neonatal mortality rates (Tripathy et al., 2010). While the intervention was not targeted specifically at maternal depression, a reduction in moderate depression, as measured by the Kessler 10-item scale, was found in the intervention group compared with the control group in the third year after the start of the trial. Determining whether the improvements in the mother and infant outcomes are sustained over time will be an important question for future research.

CONCLUSION

Depression is a major contributor to the burden of disease in developing countries (Murray & Lopez, 1997). Postnatal depression is particularly important because it occurs at the time when both the mother and her rapidly developing infant are vulnerable to adverse effects in the environment. Prevalence studies have documented substantial rates of postnatal depression across many developing countries, with rates typically significantly higher than in developed contexts. Not only is an infant's development at increased risk of negative effects by the extreme levels of social and economic adversity often encountered in developing contexts, but it is likely to be further disrupted by the impact of postnatal depression on the quality of caregiving from the mother. There is compelling evidence linking postnatal depression to a raised risk for adverse infant outcomes in developed countries, and increasing evidence for a similar association in the developing world. Further, socioeconomic status has been shown to moderate the effects of postnatal depression on caregiving. It is, therefore, of paramount importance that interventions are developed and evaluated to support mothers and families in caring for young infants. There is a paucity of systematic intervention studies in developing compared to developed countries, but the available research suggests that mother–infant interactions and maternal depression should both be targets for treatment. Interventions that are sustainable and can be "scaled up" in developing countries with relatively limited resources are urgently required. The fact that such positive outcomes have been obtained in the RCTs to date using lay therapists is particularly promising in this regard. It should be emphasized that despite the adversity faced by mothers with depression and their infants in developing contexts, many children seem to remain physically healthy and develop normally, demonstrating remarkable resilience in both the quality of maternal caregiving and child development. One of the biggest issues facing clinicians and policy makers is the stigmatization of psychological problems. In order to support families with young children, where a caregiver is struggling with depression, it is essential that community-based interventions are readily available without stigma.

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Chapter 5

WITHDRAWAL BEHAVIOR AND DEPRESSION IN INFANCY

Antoine Guedeney and Kaija Puura

With the Baby Alarm Distress Scale Study Group (Monica Oliver, Argentina; Daphna Dollberg, Israel; Simone Facuri-Lopes, Brazil; Mirjami Mäntymaa, Finland; Stephen Matthey, Jennifer Re, and Samuel Menahem, Australia; Barbara Figueiredo, Joana Silva, and Isobel Soares, Portugal; Emilia de Rosa, Italy; Lisa Milne, Australia; Vibeke Moe, Unni Tranaas Vannebo, Kari Slinning, Hanne Braarud, and Lars Smith, Norway; Mikael Heinmann, Sweden; Dora Musetti, Uruguay; Jorge Tizon, Spain; J. Wendland and B. Grollemund, France)

Social and emotional development in early infancy is widely recognized as crucial for all aspects of functioning throughout the lifespan (Sroufe, 1995). The infant's ability to relate to and understand the social world develops within the close and continuous interactions between parent and infant. Several factors can have a deleterious effect on early infant social and emotional development. Social risk factors include infant prematurity or illness, genetic risk factors, living in inadequate or inappropriately stimulating environments, and early disruptions in the parent–child relationship and the adequacy of parental care (Feldman, 2007). Parental mental illness also poses a risk for infant attachment and social and emotional development (Field, 2001; Murray, Fiori-Cowley,

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A former version of this chapter was made for the Lars Sven jubilee, to be published in Norwegian, along with Kajia Puura, Mirjami Mäntymaa, and Tuula Tamminen. Published with permission.

Hooper, & Cooper, 1996; Teti, Gelfand, Messinger, & Isabella, 1995). The influence of potential risk factors on infant development is dependent on qualities of both the parent and of the infant, which together determine the mutual adaptation capacity of the dyad (Mäntymaa, 2006), and its capacity to develop a parent-infant synchrony within the first 18 months of life of the infant (Feldman, 2007).

INFANT DEPRESSION: DOES IT EXIST?

Infant depression was a starting point in the history of infant psychiatry (Guedeney, 2007). We use the term infant depression often, and this label brings with it the recognition of the infant as a person, of being someone who can suffer psychic pain. Depression in older children and adults is seen as the psychological survival mechanism in face of unbearable situation, where an individual loses his or her interest in interacting with the world and his or her emotions get flattened. Using the term depression with infants then means that the infant also has tried all solutions for keeping his balance. Even though we use the word often, we know very little about infant depression. We don't know when it begins. Can depression in infancy have an onset at any age, or is there an age limit? What do we actually call depression in infancy, between zero and three years of age? On the model of DSM-IV there is a recent tendency to diagnose major depressive disorder very early in life, as early as two and a half to three years. However, the proposal here is that there are no major depression disorders developing before three years of age, or two and a half at the earliest (Guedeney, 2007). Before that limit, the suggestion is to use the concept of sustained withdrawal behavior, described by Engel and Reischman (1956, 1979), *a propos* of the famous case of Monica. The learned helplessness paradigm (Seligman, Abramson, Semmel, & von Baeyer, 1979) may prove useful for understanding what kind of relationship leads to infant depression. There might be a continuum between withdrawal reaction and infant depression, withdrawal being a first level of reaction of an infant trapped in an inescapable situation (Guedeney, 2007).

The DC 0–3R (Zero to Three, 1995) classification system places infant depression into the affective disorders, and the revised version (DC: 0–3R) of the diagnostic system includes more detailed criteria for major depression in infancy. These criteria are based on the Research Diagnostic Criteria Revision (RDC-R, AACAP) and this gives a much more precise description and inclusion criteria for depression in toddlers. We now have Luby's proposals for adaptation to children aged two to five years (Luby et al., 2006). With these criteria she finds that 33% of 3- to 5.6-year-old children in a clinical community sample could have major depression. But this leads to the risk of clear over diagnosis. Why should depression be more frequent in early childhood that later on, even in a community referred sample?

ANIMAL MODELS OF DEPRESSION AND WITHDRAWAL

Bowlby has described attachment and withdrawal systems as distinct, though having the same function, and triggered by the same situations, and (both system) easily conflicting (Bowlby, 1973). Panksepp has proposed a schema of the main types of emotional systems in mammalians: lust, care, panic, play, fear, rage, and seeking in which withdrawal behavior appears to be part of the panic and fear systems (Panksepp, 2006). Therefore, withdrawal behavior is clearly recognized as a behavioral and emotional system in infants.

The link between depression/withdrawal reaction in infants and learned helplessness behavior was made relatively recently. In the famous, but now ethically disputable experimentation by Seligman et al. in 1979, a dog was electrically shocked in an inescapable situation. This situation they called the learned helplessness situation, which lead in the dog to resignation. The model of learned helplessness has become a model for depression, and to the use of the learned helplessness paradigm as a key screening test for antidepressant activity (Seligman et al., 1979). Some recent advances in veterinary medicine are fascinating for us, infancy mental health professionals: It is now possible to describe a nosography of attachment-based behavioral disorders in dogs and cats (Pageat, 1995). Clearly, infant mental health professionals are interested in the richness and complexity of clinical syndromes of depression in puppies and kittens, as they provide us both with clear cut physiopathological, evolution and therapeutic frameworks for different kind of clinical situations related to depression, attachment disorders, separation anxiety and phobias (Pageat, 1995).

The concept of approach/withdrawal seems to be fundamental in the analysis of behavioral development (Greenberg, 1995). Comparative psychology could help screen the pathways of this behavior and to look for the genes implicated in this endophenotype, particularly around dopamine and DRD4 alleles, since such correlations have been found for the genetic susceptibility of attachment disorganization (Bakermans-Kranenburg & van IJzendoorn, 2007). An endophenotype is a measurable component unseen by the unaided eye along the pathway between disease and distal genotype. It may be neurophysiological, or biochemical, or neuropsychological in nature. Endophenotypes represent simpler clues to genetic underpinning than the disease syndrome itself (Gottesman & Gould, 2003).

WITHDRAWAL BEHAVIOR IN INFANTS

The term *withdrawal* has been known and used in the clinical study of infancy, although it is hard to find a clear definition of it. Clinical reports and research findings on the subject are surprisingly rare. To some extent withdrawal is a normal feature of parent–infant interaction and plays an important role in its regulation (Brazelton, Koslowski, & Main, 1974). Engel and Reichsman (1956) described pathological withdrawal in a marasmic and developmentally retarded infant, Monica, who came to their pediatric service with severe failure to thrive (FTT) when she was 14 months old. She had esophageal atresia and required feeding through a gastric fistula. When her care was abruptly transferred from her warm grandmother to her isolated mother, who was disgusted by her fistula, she was noted to withdraw, cry, and lose weight although no physical cause was found. Now she would probably be considered as a typical case of disorganized attachment. After prolonged care, she improved and developed normally.

More recently, based on extended clinical experience, Fraiberg (1980, 1982) described a group of pathological defenses observed between 3 and 18 months of age in infants who experienced severe danger and deprivation. These early defenses, “avoidance,” “freezing,” and “fighting,” are, following Selma Fraiberg, apparently summoned from a biological repertoire. Thus, withdrawal takes an important place, both in physiology and in pathology, in the infant’s repertoire of response to stress. Infant withdrawal appears also to be a key symptom of infant depression, as it seems unlikely that a depressed infant show no sign of withdrawal; however, withdrawal reaction appears to cover a much larger scope than infant depression, including attachment disorders, autistic syndromes, post traumatic stress syndrome and anxiety. A sustained withdrawal reaction can also be observed in many acute and chronic organic conditions. In between, intense and chronic pain in infancy is characterized by a very severe withdrawal reaction that correlates with the intensity of the pain (Gauvain-Piquard, Rodary, Rezvani, & Serbouti, 1999).

Sustained withdrawal reaction seems to be a good target for early screening in infant mental health, as negative symptoms are more difficult to assess than the more obvious, positive ones, and because withdrawal is a major component in the infant’s behavioral response repertoire to stress and relationship disorders; moreover, this behavior has to be assessed within a relationship established with the child (Guedeney, 1997). Feldman stresses the importance of withdrawal behavior in infants as assign of a dysregulation of parent–infant synchrony (Mäntymaa, 2006; Feldman, 2007).

MATERNAL DEPRESSION, MATERNAL ANXIETY, INFANT DEPRESSION, AND WITHDRAWAL

The relationship between maternal and infant depression is no more direct or simple than the one between separation and depression in infants. The infant's reactions to the interruption or to the violation of the expectations within the interaction are both obvious and durable in the still-face paradigm (Cohn & Tronick, 1983), or in the experimental desynchronization setting designed by Murray and Trevarthen (1986). The infant's reaction to these different conditions follows a path clearly delineated by Robertson and Bowlby (1952), with the key sequence of surprise, protestation, withdrawal, and despair. Tronick has recently insisted on the effect of maternal depression on the extension of what he calls the *dyadic states of consciousness* (Tronick & Weinberg, 1997). These key studies have shown some possible models of transmission of the depressive affect between mother and child, using the still face paradigm. Depressed mothers are less positive and more negative when interacting with their infants. Infants of depressed mothers are less positive and more negative when interacting with their mothers in these laboratory situations. More to the point is the fact that infants of depressed mothers show depressed behavior even with nondepressed adults, demonstrating a generalization of the depressive model of the relationship (Field, 2001; Field et al., 1988; Field, Diego, Hernandez-Reif, & Fernandez, 2007; Field et al., 2006). These behaviors result at least in part from the poorer interaction provided by the mother, as postpartum depressed mothers have been observed for instance to be less contingent and less affectively attuned to their infant (Murray et al., 1996).

Postpartal interaction may not be the only way maternal depression and anxiety affect the development of the infant. Several studies have suggested that both mother's anxiety and depression during gestation have a negative effect on the fetus behavior and development: fetuses of anxious/depressed pregnant women show signs of behavioral immaturity when compared with fetus of nonanxious/nondepressed pregnant women (DiPietro, Hilton, Hawkins, Costigan, & Pressman, 2002). It has also been shown that mothers of newborn infants with poorer motor maturity are particularly at risk to develop postpartum depression, and also that newborns of mothers depressed at delivery are less socially competent before even interacting with their mothers (Hernandez-Reif, Field, Diego, & Ruddock, 2006). This does not mean that infant's withdrawal is a passive behavior, a simple imitation of the mother's behavior. On the contrary, the depressive state of the infant is in no way a pure biological reaction, but a defensive organization of its own. Children of mothers reporting being more depressed or anxious since childbirth obtain significantly higher Baby Alarm Distress Scale (ADBB) scores (Matthey, Guedeney, Starakis, & Barnett, 2005), using Cox, Holden, and Sagovsky's EPDS scale (Cox, Holden, and Sagovsky, 1987); and children evaluated with higher values of social withdrawal show less optimal behavior in the interaction with their mothers (Dollberg, Feldman, Keren, & Guedeney, 2006; Puura, Guedeney, Mantymaa, & Tamminen, 2007).

THE ASSESSMENT OF SUSTAINED WITHDRAWAL REACTION IN INFANTS: THE DEVELOPMENT OF THE BABY ALARM DISTRESS SCALE

It is most important to identify infant withdrawal behavior as an alarm distress symptom before it becomes obvious (Ironside, 1975). Despite the formidable developmental changes in the course of infancy, it seems possible to assess a sustained withdrawal reaction in infants anywhere between 2 and 24 months of age, provided the duration of the withdrawal and its persistence in different types of relationships is checked. The ADBB (Guedeney & Fermanian, 2001) was initially designed to fit with the medical examination in a well-baby clinic. It was used here as was Winnicott's set "situation" (Winnicott, 1941) providing a somewhat regularly defined stimulation and observing the way the infant makes use of it. However, any other structured situations can be used to assess withdrawal behavior, for instance, or the still face, or the strange situation, or a Crowell assessment situation. The advantage of the scale is that it assesses infant social behavior with a stranger, rather than using the caregiver who may feel pressure to perform if asked to interact with her infant during an observation and requires no special equipment (Matthey et al., 2005). The scale has eight items, rated zero to four, with zero being normal and 32 the maximum score. The ADBB is a clinical instrument aimed at evaluating social behaviors that can be easily observed during a brief observation among children 2–24 months old. These behaviors are organized into eight items/categories: (1) Facial Expression, (2) Eye Contact, (3) General Level of Activity, (4) Self-Stimulating Gestures, (5) Vocalizations,

(6) Response to Stimulation, (7) Relationship, and (8) Attraction. Each item is rated from 0 to 4 (0 = no unusual behavior; 4 = severe unusual behavior) and a trained observer only needs an observation of 10 to 15 minutes in order to score the ADBB details and translations in several languages can be found on the ADBB Web site (http://www.adbb.net/), as well as the manual for use.

The scale has been used in different studies in Argentina, Armenia, Australia, Brazil, Finland, France, Israel, Italy, Norway, Portugal, South Africa, and Spain, with different kind of population and settings and different methodologies. An important point about the transcultural validity is that five studies found the same cut off score of 5 and over, in France, Finland, Israel, Italy, and Brazil. However, an ongoing study in Norway indicates that a lower threshold (4) might be interesting for screening (Heimann et al., unpublished manuscript). The scale has been shown to have good reliability and validity (Matthey et al., 2005). Subsequent research has shown the factor structure to vary across samples and further research has been recommended (Matthey et al., 2005). To test the clinical validity of the scale, Dollberg et al. (2006) compared a group of clinic-referred infants with a control group and found that ADBB scores were significantly higher in the clinic-referred group. The mothers of the withdrawn infants were observed to be more intrusive, the infants were less involved in the relationship and there was generally lower reciprocity in the mother–infant relationship. Mothers in the referred group were more depressed, which in turn was associated with poorer relational patterns in both the mother and the child (Dollberg et al., 2006). Gender differences were also noted, with girls being less prone to a withdrawal response. One Finnish study (Puura et al., 2010) gave the first estimation of the prevalence of withdrawal behavior at different ages, taking advantage of the Finnish well-baby clinics network used by more than 90% of the families. The aims of the study were to see whether an infant observation method can be used reliably by front line workers in primary health care, and to examine the prevalence of infants' social withdrawal symptoms. A random sample of 491 parents with 4-, 8-, or 18-month-old infants was asked to participate in the study. Parents of 363 infants (74%) agreed to participate. The infants were examined by general practitioners (GPs) during routine checkups in well-baby clinics and their withdrawal symptoms were assessed with the ADBB. A score of 5 or more on the ADBB scale in two subsequent assessments at a two-week interval was regarded as a sign of clinically significant infant social withdrawal. The ADBB scale proved to be a feasible and reliable method for detecting infant social withdrawal. Approximately 3% of infants were showing social withdrawal as a sign of distress in this normal population sample. Another Finnish study showed the importance of looking for maternal depression and paternal mental health disorders if an infant is found to be withdrawn (Mäntymaa, Puura, Kaukonen, Salmelin, & Tamminen, 2008).

A study by Figueiredo in Portugal showed that the scale was very sensitive to change, in a sample of infants of young adolescent mothers being depressed (Figueiredo, Bifulco, Pacheco, Costa, & Magarinho, 2006); a more recent study showed links between prenatal anxiety and depression and ulterior withdrawal behavior in the child (Figueiredo et al., under review). Matthey, Crncec, and Guedeney have developed a short version of the ADBB (M-ADBB), to be used as a screening tool in the Australian context, but which still waits for further validation. This version, the *modified ADBB*, includes only five areas: (1) Facial Expression, (2) Eye Contact, (3) Vocalization, (4) Activity Level, and (5) Relationship. In addition, the scoring is changed to three global levels: no problem, possible problem area, and definite problem area. Matthey and Crncec are currently making studies on the training and inter rater reliability of both scales, ADBB and M-ADBB. A recently published study using the m-ADBB (Hartley et al., 2010) showed a high rate of withdrawal with HIV-positive infants from HIV-positive mothers in South Africa.

Two studies in France have confirmed the validity of the scale, on top of the original validation study (Guedeney & Fermanian, 2001), on a sample of 64 well-baby clinic infants aged 2–24 months. The first one was made in Lyon, with 54 nonclinical dyads followed using clinical assessment, ADBB, EPDS and an interaction al measure of the quality of parent child play, PIPE. The study showed that assessing withdrawal behavior using three measures at different ages (3, 6, and 12 months) allowed for a good screening of mother child interactional disorders (Rochette & Mellier, 2007). The second study was made in Paris in a public screening health center, on 650 infants aged 10–18 months (Guedeney, Foucault, Bougen, Larroque, & Mentré, 2008) a total of 640 children with a mean age of 16 months were included in the study. Thirteen percent (*n* = 85) of the children had an ADBB score at 5 or over, and 8% (*n* = 51) of the infants had a score over 5. ADBB scores ranged from 0 to 19. There is a clear correlation between withdrawal behavior and the level of psychological difficulties as observed during the medical and psychological examination (29.6% vs. 9.6%) and between withdrawal and developmental delay (52.6% vs. 11.8%). Among withdrawn infants having psychological difficulties, 9.2% had sleep disorders, 5.3% had relational and behavioral difficulties and 3% had developmental delay disorders. More boys than girls were withdrawn (16.18% vs. 9.33%), more difficult family situations (joint custody or foster family): 35.7% vs. 12.1%,), more adopted children (57.1% vs. 12.5%), and more twins (37.5% vs. 12.5%). More withdrawn infants are taken care of at home (15.1% vs. 9.0%). No correlation was found between the SES level of the family, the ethnic origin of the child, gender, rank of birth, birth weight or prematurity, nor with any particular medical pathology, except for endocrine disorders and thriving difficulties. Another study is now being done, within the INSERM EDEN study of prenatal risk factors, including 1,000 infants assessed with the ADBB scale at one year. Two studies were made in day care setting with ADBB, one in Sao Paulo, Brazil (Assumpçao et al., 2000), and one in Paris (Guedeney, Grasso, & Starakis, 2004).

A recently launched project in Norway investigates how ADBB can be used in well-baby clinics in order to detect infants at risk for nonoptimal development (Heimann et al., submitted manuscript). The study follows 242 children from 3 to 12 months of age (192 children born at term; 50 children born 4 to 10 weeks prematurely). All children will be assessed three times with the ADBB (at three and nine months by a nurse and at six months by a GP). A follow-up at 12 months of age assesses the well-being of the mother and infant using checklists, questionnaires, interviews, and observations. Data collection starts in January 2008 and ends in October 2009. This study will assess the predictive validity of the scale, and its interest as a screening instrument in well-baby clinics. The purpose of the present study is to investigate if sustained withdrawal, as measured with a new instrument (ADBB), can be reliable evaluated during regular visits to well-baby clinic and if the information thus collected will give valuable information regarding the child's further psychosocial development. The study has a unique longitudinal design that will make it possible to investigate both stability over time and the impact of withdrawal reactions on individual developmental trajectories. In order to guarantee that the study includes children displaying a large enough variability in withdrawal reactions the sample will be divided in two different groups: One group of developing children born at term and one group prematurely born children. In addition, observed sustained withdrawal will be related to important family characteristics (depression, personality and parent–infant interactive style).

The scale has been validated in several countries and in different settings. Its face validity seems very good, as the scale is easy to use both in clinical practice and in research. However, training is necessary to reach reliability, and Matthey and Crncec have developed a training set of videos and manuals for both ADBB and M-ADBB. The Australian, Finnish, Argentinian, Brazilian (Facuri-Lopes, Ricas, & Cotta Mancini, 2008), and

Norwegian teams have developed quite an experience in training GPs, pediatricians and mental health professionals. The sensitivity and sensibility of the scale are good in all validations available, with good Cronbach alphas. The scale is fairly stable on test retest, as shown in the Paris validation. Confirmatory factor analysis in the Brazilian Lopes study show three factors, with item 5, autostimulating gestures, standing alone, along with the two hypothesized dimensions, interpersonal and noninterpersonal. No study so far has yielded a result that was going against literature or clinical expertise: withdrawal behavior in infants is not linked with ethnicity, with parent's age or SES, but is linked with every condition known to hamper parent child relationship or with the ability of the child to establish and sustain relationships. The study by Milne, Greenway, and Guedeney (2009) shows the predictive validity of the scale, as does the EDEN study (Larroque, submitted manuscript). This study provides two important contributions to the literature on infant withdrawal. Firstly, it documents the longer terms effects of infant withdrawal. Secondly, it provides data supporting the longer-term validity of the ADBB, thus emphasizing its importance as an early screening measure. The results clearly demonstrate that withdrawal in early infancy (about six months' age), as measured by the ADBB are associated with later behavioral and developmental functioning. As one might have predicted, the ADBB seems particularly sensitive to predicting later social and communication problems. Infants who showed signs of withdrawal later as toddlers tended to be rated as higher on the Social Skills subscale of the BASC-2 suggesting that they had more difficulty with the interpersonal aspects of social adaptation. Similarly, withdrawn infants later as toddlers showed poor communication in terms of their functional communication (the ability to express ideas and communicate in a way that others can understand (as measured by the BASC-2) and in terms of their formal expressive and receptive language skills, as independently assessed using the Bayley-III. Interestingly, infant withdrawal was only associated with two types of behavioral problems, as reported by the mother, atypicality and attention problems. Atypicality measures the tendency of the child to behave in odd or peculiar ways, as marked by their disconnection or lack of awareness of their surrounds. High scores on this scale may reflect psychotic or autistic disorders.

Recently, more research attention has been given to early identification of autism. However, most of the studies exploring early autistic features use young preschool age children, about two to three years of age. The finding of this study suggests that there is potentially some aspect of sustained withdrawal in infancy that may point to autistic spectrum disorders (hence, it is likely that that infant withdrawal resulting from an early impoverished mother–infant relationship results in inattention and possible learning difficulties in early toddlerhood).

The scale is interesting to use with premature infants, who are especially at risk of relationship disorders and of withdrawal behavior. Although sustained withdrawal behavior is a key symptom of the diagnostic of autism, to date, it has received little attention in studies of precursory signs of pervasive developmental disorders (PDD). The aim of the study by Wendland, Gautier, Wolff, Brisson, and Adrien (2010) was to identify early signs of sustained withdrawal behavior in infants, aged from birth to 18 months, later diagnosed as autistic, through the analysis of home movies. The validity of the ADBB in the screening of early signs of autism was tested by comparison with a specific scale of autistic behaviors in infants: the ECA-N. Compared to normal infants, infants with a PDD have higher and more lingering scores of sustained withdrawal behavior during their first 18 months. While infants with PDD showed important interindividual differences in the ADBB and the ECA-N assessments, their individual scores profiles in the ADBB and the ECA-N were very similar. The strong correlation between the scores of the ADBB and the ECA-N may confirm the potential predictive value of sustained withdrawal behavior in the screening of autism. However, sustained withdrawal behavior may not be present since the first months of life and may show important variability during the first 18 months.

CONCLUSION

One of the most important tasks in the field of infant psychopathology is to identify the kind of relationship disturbances that can be linked specifically with each diagnostic category, here infant depression, and to assess the developmental transformation of infant depression over time, particularly within periods of acute developmental transformation. Infant withdrawal behavior is an interesting endophenotype and a good alarm signal. More studies are needed to link withdrawal with genetic susceptibility, particularly with the DRD4 alleles, to address infants with special needs and specific risk situation (as clef palate abnormalities) and to assess the efficiency of training with the ADBB.

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APPENDIX

ALARM DISTRESS BABY SCALE (ADBB) 2009 (GUEDENEY)

Each item is rated on a scale from 0 to 4:

0: No unusual behavior
1: Slightly unusual behavior
2: Mild unusual behavior
3: Clear unusual behavior
4: Severe unusual behavior

This scale is best rated by the observer on the basis of his or her observations, immediately following the clinical interview. Initially, spontaneous behavior is assessed, then follows stimulation (smile, voice, gesture, touch, etc.) and the evolution along time. The rating is what seems more significant during the whole examination procedure. In case of doubt between two ratings, return to the preceding definition. *In case of doubt, use the lowest rating (0).*

1. FACIAL EXPRESSION: Observer assesses any reduction of facial expressiveness:

   0: Face is spontaneously mobile, expressive, animated
   1: Face is mobile, expressive, but limited in range
   2: Little spontaneous facial mobility
   3: Face is fixed, sad
   4: Face is fixed, frozen, absent

2. EYE CONTACT: Observer assesses the reduction of eye contact:

    0: Eye contact is spontaneous, easy, and sustained
    1: Brief spontaneous eye contact
    2: Eye contact is possible only when initiated by observer
    3: Eye contact is fleeting, vague, elusive
    4: Total avoidance of eye contact

3. GENERAL LEVEL OF ACTIVITY: Observer assesses any failure of motion of the head, torso, and limb without taking into account hand and finger activity:

    0: Frequent and well coordinated, spontaneous head, torso, and limb motions
    1: Reduced general level of activity, few head and limb movements
    2: No spontaneous activity but reasonable level in response to stimulation
    3: Very low level of activity in response to stimulation
    4: Immobile, rigid, stiff, whatever the stimulation

4. SELF-STIMULATING GESTURES: Observer assesses the frequency with which the child is engrossed with his or her own body activity: fingers, hand, hair, thumb sucking, repetitive rubbing, and so on, in a sort of mechanical, nonpleasurable way that seems detached from the rest of the activity:

    0: Absence of self-stimulation; autoexploration is appropriate to the level of general activity
    1: Self-stimulation occurs fleetingly
    2: Self-stimulation is rare but obvious
    3: Frequent self-stimulation
    4: Constant self-stimulation

5. VOCALIZATIONS: Observer assesses the lack of vocalization expressing pleasure (cooing, laughing, babbling, babbling with consonant sounds, squealing with pleasure) but also lack of vocalization expressing displeasure or pain (screaming or crying):

    0: Frequent, cheerful, modulated spontaneous vocalizations; brief crying or screaming in response to an unpleasant stimulation or sensation
    1: Brief spontaneous vocalizations
    2: Rare spontaneous vocalizations
    3: Whimpering only in response to stimulation
    4: Absence of vocalization, even with nociceptive stimulation

6. BRISKNESS OF RESPONSE TO STIMULATION: Observer assesses the sluggishness of response to pleasant or unpleasant stimulation during the examination (smile, voice, touch). The amount of response is

not being assessed here but only the delay in response; *an absence of identifiable response does not allow a rating*:

0: Appropriate, brisk, and swift response to stimulation
1: Slightly delayed and sluggish response to stimulation
2: Sluggish, delayed response to stimulation
3: Markedly sluggish response to even unpleasant stimulation
4: Very delayed response to stimulation or absence of any response to stimulation

7. RELATIONSHIP: Observer assesses the infant's ability to engage in a relationship with him or her or with anyone present in the room other than his or her caretaker. Relationship is assessed through attitude, visual contact, and reaction to stimulation:

0: Relationship clearly and quickly established, rather positive (after a possible initial phase of anxiety) and sustained
1: Relationship identifiable, positive or negative, but less sustained
2: Relationship mildly evident, delayed, positive or negative
3: Doubt as to the existence of a relationship
4: Absence of identifiable relationship to others

8. ATTRACTION: The effort needed by the observer to keep in touch with the child is assessed here, along with the pleasure initiated by the contact with the child *and the subjective feeling of length of time during the examination*:

0: The child attracts attention through his or her initiative and contact, generating a feeling of interest and enjoyment
1: There is interest toward the child, but without less pleasure than as described in 0
2: Neutral feelings toward the child, possibly with a tendency to forget to focus on the child
3: Uneasy feeling toward the child, feeling of being maintained at a distance
4: Disturbing feeling with the child, impression of a child beyond reach

LAST NAME: FIRST NAME: TOTAL:
DATE: / / / AGE: / /MONTHS / / DAYS EXAMINER

Chapter 6

MENTALIZATION AND THE ROOTS OF BORDERLINE PERSONALITY DISORDER IN INFANCY

Peter Fonagy, Patrick Luyten, and Lane Strathearn

Mentalization is a form of social cognition. Human evolutionary history included a point where the ability to predict someone else's response and use that prediction to successfully navigate the social exchange acquired substantial survival value (Humphrey, 1988). To predict people's responses requires understanding their mental state at the time, what they know, how they feel, what they immediately aim to do, what their goals and wishes might be as these states will determine their behavior. The awareness that other people have thoughts and feelings that do not necessarily match our own and that can provide an explanation of their actions has been referred to in the literature as having "theory of mind" (ToM) or "mentalizing" skills (Lieberman, 2007; Saxe, Carey, & Kanwisher, 2004). No animal, not even the most intelligent of nonhuman primates, can always reliably discern the difference between the act of a conspecific due to serendipity and one rooted in intention, wish, belief or desire. The capacity to mentalize has also been argued to account for the other major difference between humans and other apes: (1) self-awareness and self-consciousness as a path to simulation bringing with it social emotions such as embarrassment, shame, and guilt; (2) the species-specific striving to be more than a "beast," to live beyond one's body, to aspire to a spirit that transcends physical reality and step beyond one's own existence; and (3) the social origin of the self in the recognition of oneself in the mental state of the other as the root to a sense of selfhood (see Allen, Fonagy, & Bateman, 2008, for a more comprehensive review of the concept).

As we will discuss in detail later, mentalizing involves inferring mental and emotional states from a range of inputs which include language, nonverbal information which complements language (paralinguistic cues), gestures, facial expressions and other nonverbal cues, such as eye gaze direction. These inputs are however integrated with memories held in semantic or autobiographical memory concerning the other person's likely perspective and belief states (Baron-Cohen, Tager-Flusberg, & Cohen, 2000). Historically the litmus test of rudimentary mentalizing ability was the so-called false belief task which required predicting Sally's (searching) behavior when her knowledge of a piece of physical reality (the location of a ball) was based on a false belief since, unbeknownst to Sally, Ann had moved the ball to another physical location. When Sally comes back into the room, where will she look for the ball, in the place where she left it or the place where the child knows the ball to be? Decades of research using this task in hundreds of studies have demonstrated that false belief performance shows a consistent developmental pattern, even across various countries and various task manipulations (e.g., whether the task objects were transformed in order to deceive the protagonist or not) (Wellman, Cross, & Watson, 2001).

Considering mentalization as meaningfully captured by a simple experimental task does no justice to the concept. For example, there are many tasks tapping the same or similar capacities yielding different developmental models. Using less demanding response modes moves the acquisition of theory of mind forward by at least two years (Surian, Caldi, & Sperber, 2007). Other theory of mind tasks, such as the faux pas task, require greater developmental maturity, perhaps because they require an understanding of false belief to be integrated with an understanding of the emotional impact of beliefs (Stone, Baron-Cohen, & Knight, 1998). Identifying a faux pas requires understanding that someone unintentionally said or did something they should not have (e.g., asking someone what they are going to wear to a party only to discover that the person has not been invited) and that this behavior has emotional consequences. Mentalization is a biologically programmed developmental achievement for all human beings, perhaps similar and linked to language (Harris, 2009).

THE ORIGINS OF MENTALIZATION IN EARLY ATTACHMENT RELATIONSHIPS

Orientation to other minds is part of the behavior repertoire of all infants and the developmental pathway is reasonably well charted (Sharp, Fonagy, & Goodyer, 2008). Weeks after birth the baby smiles at humans (social beings) in preference to objects and from under 12 months babies deliberately engage and redirect their caregiver's attention by pointing and vocalizing. From about nine months the baby differentiates goal oriented actions and imitates others only when this is rational in terms of the actions of the model (Gergely, Bekkering, & Kiraly, 2002; Gergely & Csibra, 2005). By 2.5 years children implement complex social tactics—teasing, lying, saving face. Perspective taking emerges gradually over the first 18 months of life. Children manifest increasing flexibility in using social tactics in middle childhood and by 5–6 will tell "white lies" to protect other people's feelings (not just to avoid punishment) and manifest growing understanding of self-conscious emotions (guilt, embarrassment, pride). Relatively young children will take other people's feelings into account in emotional reactions and manifest concepts of fairness and justice (share things equally) (Sutter & Kocher, 2007). Second-order metarepresentation is thought to be acquired by 6 or 7 (Perner & Lang, 1999).

This early development of theory of mind is not entirely consistent with the neuroimaging studies, which have demonstrated that brain regions supposedly critically involved in mental state attribution (e.g., the medial prefrontal cortex and lateral temporoparietal regions) develop both structurally and functionally at least up to the age of 25. It is not surprising therefore that mental state understanding also continues to develop well past adolescence and probably well into young adulthood (Dumontheil, Apperly, & Blakemore, 2009). The development of the capacity to adopt the other's perspective way beyond infancy speaks to the complexity of the mentalizing process. We believe that it is essential to consider this multifacetedness when applying the mentalizing concept to clinical conditions such as borderline personality disorder (BPD).

A rich developmental psychopathology literature has linked mentalization deficit to a range of clinical conditions, particularly neurological disorders, such as autism, schizophrenia and frontotemporal dementia, which have all been characterized by deficits in mentalizing skills that lead to poor interpersonal relationships and compromised quality of life (Snowden et al., 2003). It is unlikely that these different forms of psychological disturbance could all in some way be causally linked to similar mentalization deficits. We evidently need to identify how different components of mentalizing contribute to the vulnerabilities in interpersonal relationships characteristic of each condition and what neural mechanisms underpin these dysfunctional processes (Luyten, Fonagy, Mayes, & Van Houdenhove, submitted manuscript). In this paper we focus on the way the dysfunction of attachment-related mentalization may explain BPD.

QUALITY OF ATTACHMENT AND EARLY MENTALIZATION

Reddy (2008) offers perhaps the most comprehensive account of factors that contribute to the emergence of mentalization. Reddy proposes that the emergence of mentalization is facilitated by a "second person." She suggests that we come to know of other minds only through interacting with them and observing their responses to us and our responses to them. This requires engagement with the person. Reddy reacts against the traditional literature on mentalization which almost exclusively sees its development as an individual rather than as a social process, despite the evident profound social function of mentalization in human behavior. She makes an ironclad case that knowing minds takes place for both infants and for adults through engagement with minds, so that the richer this engagement the richer a person's representation of mental state is likely to be. Thus the starting point for understanding other minds is not isolation and ignorance but attachment relationships. In a similar vein we have argued that evolution had assigned the attachment relationship the task of conveying knowledge about minds to the human infant and that the quality of the relationship with the attachment figure will therefore impact profoundly on the rate of development and the child's competence in mentalizing.

A number of studies have reported associations between the quality of children's primary attachment relationship and the passing of standard ToM tasks somewhat earlier (Fonagy, Redfern, & Charman, 1997; Fonagy & Target, 1997; Raikes & Thompson, 2006; Symons, 2004). For example, the Separation Anxiety Test, a projective test of attachment security, predicted belief-desire reasoning capacity in 3.5- to 6-year-old children, controlling for age, verbal ability and social maturity (Fonagy, Redfern et al., 1997). In this task the child is asked what a character would feel, based on his or her knowledge of the character's belief. Quality of belief-desire reasoning was predicted from attachment security in infancy: 82% of babies classified as secure at 12 months with mother passed the belief-desire reasoning task at 5.5 years (Fonagy, Steele, Steele, & Holder, 1997). 46% of those who had been classified as insecure failed. Infant–father attachment (at 18 months) also predicted the child's performance.

It should be noted that not all studies have found a relationship between attachment classification and theory of mind tasks. The association is somewhat more likely to be observed for emotion understanding than ToM (Oppenheim, Koren-Karie, Etzion-Carasso, & Sagi-Schwartz, 2005). Given the weak and unreliable association between attachment and measures of mentalization it is most unlikely that the pathway connecting the two is a direct one. Secure attachment and mentalization may both be facilitated by aspects of parenting. The strongest evidence for this comes from observations that the inclination of mothers to take a psychological perspective in relation to their own actions or in relation to their child, including maternal "mind-mindedness" and "reflective function" as they interact with or describe their infants, is associated with both secure attachment and mentalization (Fonagy & Target, 1997; Meins et al., 2002; Sharp, Fonagy, & Goodyer, 2006; Slade, 2005). What qualities of parenting appear to facilitate the establishment of robust mentalization? Precocious understanding of false beliefs has been associated with more reflective parenting practices (Ruffman, Perner, & Parkin, 1999), the quality of parental control (Cutting & Dunn, 1999; Vinden, 2001), parental discourse about emotions (Denham, Zoller, & Couchoud, 1994), the depth of parental discussion involving affect (Dunn, Brown, & Beardsall, 1991) and parents' beliefs about parenting (Ruffman et al., 1999; Vinden, 2001). Parenting of this kind is likely to be strongly associated with the child's acquisition of a coherent conceptual apparatus for understanding behavior in mentalistic terms. It is not hard to understand why parents whose disciplinary strategies focus on mental states (e.g., a victim's feelings, or the nonintentional nature of transgressions) should have children who succeed in understanding the importance of mental states better earlier, as this capacity is reflected in ToM tasks (Charman, Ruffman, & Clements, 2002). By contrast, one might well expect power-assertive parenting (including spanking and yelling) to retard the development of the ability to understand false beliefs (Pears & Moses, 2003). However, in line with the transactional model we advocate, we should consider the possibility that less mentalizing children may be more likely to elicit controlling parenting behavior as well as the parent-to-child causation, that more mindful or reflective parenting facilitates both attachment security and the development of mentalization.

Tolerating negative affect could be a shared characteristic of secure attachment and a family environment facilitating mentalizing. For example, familywide talk about negative emotions, often precipitated by the child's own emotions, has been shown to predict later success on tests of emotion understanding (Dunn & Brown, 2001) and reflecting on intense emotion without being overwhelmed is a marker of secure attachment (Sroufe, 1996). The number of references to thoughts and beliefs and the relationship specificity of children's real-life accounts of negative emotions correlate with early ToM acquisition (false belief performance) (Hughes & Dunn, 2002). There are of course many other characteristics of family function that could link a "secure base" with mentalization. Considering these may be of relevance both from the standpoint of prevention and identifying potentially helpful therapeutic attitudes.

Three programs of work, by Elizabeth Meins (Meins, Ferryhough, Fradley, & Tuckey, 2001), David Oppenheim (Oppenheim & Koren-Karie, 2002) and Arietta Slade and their respective groups (Slade, 2005; Slade, Grienenberger, Bernbach, Levy, & Locker, 2005) have sought to link parental mentalization to the development of affect regulation and secure attachment by examining interactional narratives between parents and children (for a more comprehensive account of these and other investigations of the impact of the parent's capacity to treat the child as a psychological agent on emotional development, see review by Sharp & Fonagy, 2008). These studies demonstrate that (1) mentalizing comments to and about the young child increase the chance of secure attachment and (2) nonmentalizing descriptions of the child reduce the frequency of maternal behaviors that might enhance secure attachment. Mothers' inclination to take the psychological perspective of their child, including maternal mind-mindedness and reflective function in interacting with or describing their infants, has been found to predict not only attachment class but also psychological problems and the child's acquisition of a theory of mind (Fonagy, Steele et al., 1997; Sharp, Fonagy, & Goodyer, 2006).

The findings suggest that a mother's secure attachment history permits and enhances her capacity to explore her own mind and promotes a similar enquiring stance toward the mental state of the infant. The stance is one of open, respectful enquiry that makes use of her awareness of her own mental state to understand her infant, but not to a point where her understanding would obscure a genuine awareness of her child as a separate person. The depth of her awareness of the infant in turn reduces the frequency of behaviors that might undermine the infant's natural progression toward evolving their own sense of mental self through the dialectic of their interactions with the mother. The work of Goldberg and colleagues (Goldberg, Benoit, Blokland, & Madigan, 2003) indeed shows that atypical maternal behavior related not only to infant disorganization of attachment but also to unresolved (disorganized) attachment status on the mother's Adult Attachment Interview (AAI). Thus, while secure mother–infant attachment may not directly facilitate the development of mentalization, it is an indicator of an approach the caregiver takes to the child that may have a direct facilitative effect. Perhaps more crucially, secure infant attachment indicates the absence of aspects of parental behavior that might have undermined mentalization. Preliminary evidence that the capacity for change in attachment organization decreases over development underlines the danger that persistent trauma will lead to long-term disorganization of attachment, with attendant poor development of social cognition and substantially raised risks of psychopathology (Kobak, Cassidy, Lyons-Ruth, & Ziv, 2006). However, we are not suggesting that parental mind-mindedness is inevitably helpful for the child's emotional development. Mind-mindedness is likely to be one of those parental attributes that is most adaptive in moderation. While evidence on this issue is still lacking, on the basis of our clinical observations we have proposed that maladaptive aspects of parental mentalizing of a child can be either deficient (concrete and stimulus bound) or excessive or hypermentalizing (necessarily going beyond the data, often quite distorted and sometimes paranoid). In the research considered earlier, the measure of mind-mindedness was confounded with the accuracy in the scoring; low scorers could be either deficient or excessive mentalizers because both would be rated as failing to reflect the child's mental state with what we may refer to as "grounded imagination" (Allen, 2006). However, regardless of the confounding of accuracy and concreteness in assessments of parenting, the literature suggests that it is not attachment per se but correlated features of parenting, particularly an adult mind taking an interest in a child's mental state, which may be critical in the robust establishment of mentalization.

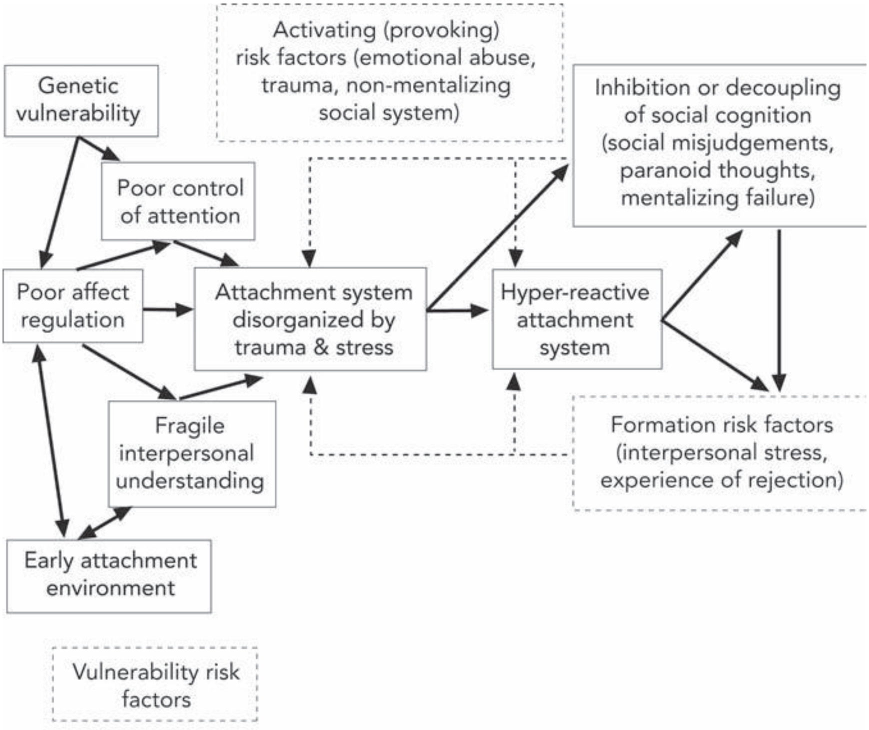
EARLY ATTACHMENT EXPERIENCES, STRESS REGULATION, MENTALIZATION, AND BPD

A rudimentary version of the hypothesis that BPD involves impairments in mentalization was advanced over 20 years ago (Fonagy, 1989) and we have tried to test and develop the mentalization-based approach to BPD and refine its clinical application in the light of empirical observations by others as well as our own work (Allen et al., 2008; Bateman & Fonagy, 2006; Fonagy & Bateman, 2006). This chapter is a further effort at clarification and expansion with special attention to the role of vulnerability created in infancy. Throughout we have consistently maintained that the capacity to understand the actions of others in terms of putative states of mind (thoughts, feelings, wishes, and desires) is a constitutional potential achieved through social development. We have argued that the acquisition of this capacity occurs through the infant's and young child's engagement with others with whom strong emotional relationships exist, and that the quality of social cognitive engagement will be moderated by the quality of these attachment relationships, particularly but not exclusively, early attachments. Secure attachment is likely to index the resources devoted to the child's subjective experience being contingently responded to (mirrored) by a trusted other, and is associated with the rapid and robust development of mentalization provided that these secure attachment figures possess mentalizing abilities. Part of the formative influence of early attachment arises from its link to the quality of affect mirroring, which in turn impacts on the development of emotion regulative processes and self-control (including attention mechanisms and effortful control) as well as the capacity for mentalization. Disruptions of early attachment with or without later trauma can undermine the capacity for mentalization and, linked to this, create substantial disorganization of the self-structure. An individual's ability to mentalize will vary in quality in relation to their level of emotional stress and their interpersonal context. We have suggested that the emergence of mentalization between the second and fifth year of life is normally antedated by immature forms of subjectivity that nevertheless persist and are revealed when mentalization and the associated capacities for affect representation, affect regulation and attentional control become dysfunctional. Such temporary failures of mentalizing in the context of emotionally intense relationship contexts are characteristic of BPD. The inhibition or decoupling of a mentalizing function at these times causes the apparent "reemergence" of modes of thinking about subjective experience that antedate full mentalization. We have also proposed that limitations in the capacity to experience mental states internally creates a constant pressure for externalization of internal states (projective identification) which is one of the consistent features of dynamic descriptions of BPD. This externalization is also propelled by self-disorganization that includes intolerably painful self-states originally internalized in the course of traumatic experiences to assist coping as part of the self-structure (the self-destructive alien self). A therapeutic intervention that focuses on the patient's capacity to mentalize in the context of attachment relationships can be helpful in improving both behavioral and affective aspects of the condition.

In previous papers we have reviewed evidence in support of these contentions (Fonagy & Bateman, 2007, 2008). In essence we have argued that impairments in social cognition, and particularly a lacking or compromised capacity to understand oneself and others in terms of mental states, play an important role in the development of various psychiatric disorders that involve pathology of the self (Sharp et al., 2008), most specifically BPD (Bateman & Fonagy, 2004), antisocial personality disorder (Bateman & Fonagy, 2008b), and eating disorders (Skarderud, 2007b, 2007c). Over the last decades, several prevention and treatment programs for a variety of disorders and problem behaviors have been developed and some have been evaluated in randomized controlled studies (e.g., Bateman & Fonagy, 2008a). We always assumed that mentalization was a dynamic process that was influenced by stress, and attachment stress in particular. In earlier papers we proposed that, at extreme levels, the activation of the attachment system is associated with a deactivation of the mentalization system along with other emotion-induced cognitive dysfunction. The disorganization of the attachment system has been recognized as a key aspect of the psychopathology of BPD (Gunderson & Lyons-Ruth, 2008).

A schematic representation of our proposals is presented in Figure 6.1. We suggest that genetic and early environmental factors may undermine the development of mentalized affectivity (second-order representations of emotional states). The resulting limitations of infant affect regulation will undermine the development of effortful control and the development of a robust understanding of others as motivated by mental states. These are, as with most developmental processes, potentially interactive and bidirectional in terms of causation. Poor affect regulation obviously makes sensitive caregiving more challenging and the impact of some

Figure 6.1
A schematic developmental model for borderline personality disorder



environmental influences are evidently exaggerated by certain genetic attributes (e.g., the short allele of the 5-HTT gene; Barry, Kochanska, & Philibert, 2008). Limitation of voluntarily directing attention and accurate and solid interpersonal understanding contribute to the emergence of a sound behavioral system that underpins mature attachment relationships. We assume that there are several pathways to the development of BPD, depending on the interaction between environmental and biological factors, ranging in severity from individuals that are at increased risk for BPD because of deficits in mentalization (e.g., because they have grown up in a family context characterized by low levels of mentalization and little or no attention to internal mental states), to individuals who are characterized by a defensive decoupling and inhibition of mentalizing because of experiences of abuse and neglect. Moreover, depending on the use of different secondary attachment strategies and contextual factors, some BPD patients will be primarily characterized by preoccupied or avoidant attachment, while in other individuals the attachment system will be disorganized (either from infancy or as a consequence of subsequent stress).

The disorganization of attachment relationships in our view also disorganizes the self-structure, creating incoherence and splitting that makes stress particularly hard to manage. The key consequence of attachment dysregulation in individuals with BPD is the hyperreactivity of the attachment system leading to frantic efforts to avoid abandonment, the diagnostic unstable and intense pattern of interpersonal relationships and a characteristic rapidly escalating tempo moving from acquaintance to great intimacy over extremely brief time periods. We have suggested that the hyperreactivity of the attachment system in these patients, possibly linked with traumatic experiences, may be one of the pathways to impairments of mentalization in BPD—intense affect is incompatible with judgments of social trustworthiness (Fonagy & Bateman, 2008). The vulnerability to an inhibition or decoupling of mentalization may occur for other reasons, such as the understandable reluctance of a maltreated child to contemplate the mental state of adults with frankly destructive thoughts and wishes in relation to her. At these times, mature mentalization gives way in these patients to prementalistic modes of subjectivity whereby the thoughts and feelings lose their as-if quality and become equivalent to physical events, observable physical reality becomes the only criterion for truth and the internal world can genuinely be separated and be experienced as having no real implications for the world outside as in a very extreme form of pretence. Recently accumulated data suggest that a further elaboration of this already complex model may be necessary based on improved understanding to the biology of attachment and the neural basis of mentalization (Luyten et al., 2009).

ATTACHMENT HISTORY AND INDIVIDUAL DIFFERENCES IN STRESS RESPONSIVITY

In the context of secure attachment, the activation of the attachment system predictably involves a relaxation of normal strategies of interpersonal caution. Congruent with this assumption, expressions in most languages associate love with various severe forms of sensory handicap, particularly blindness. There is good evidence that intense activation of the neurobehavioral system underpinning attachment is associated with deactivation of arousal and affect regulation systems (Luyten et al., 2009), as well as deactivation of neurocognitive systems likely to generate interpersonal suspicion—that is, those involved in social cognition or mentalization, including the lateral prefrontal cortex (LPFC), medial prefrontal cortex, lateral parietal cortex, medial parietal cortex, medial temporal lobe, and rostral anterior cingulated cortex (see Fonagy, Luyten, & Strathearn, in press).

The activation and deactivation of the attachment system appears to be closely linked to arousal and stress regulation. Following the model outlined by Mayes (2006) we suggest that with increased arousal there is a switch from cortical to subcortical systems, from controlled to automatic mentalizing and subsequently to nonmentalizing modes. Based on Arnsten's (1998) dual process model, Mayes (2006) proposed that stress regulation is not a generalized state of activation/deactivation but a differential balance of excitation and inhibition involving multiple, interactive neural systems with different neurochemical substrates regulating specific and different aspects of prefrontal, posterior cortical and subcortical functions. For instance, as the level of cortical activation increases through mutually interactive norepinephrine alpha 2 and dopamine D1 systems, prefrontal cortical function improves, including the capacity for attentional control, planning/organization and explicit mentalization. However, with further increases of stimulation, norepinephrine alpha 1 and dopamine D1 inhibitory activity increases to the point that the prefrontal cortex goes "offline" and posterior cortical and subcortical functions (such as more automatic, implicit, affect focused forms of mentalization) are enhanced and finally take over. Increasing levels of norepinephrine and dopamine interact such that above a certain threshold, the balance shifts from prefrontal executive functioning to amygdala-mediated memory encoding and posterior-subcortical automatic responding (fight-flight-freeze).

There are good reasons to suppose that different attachment histories are associated with attachment styles that differ in terms of the associated background level of activation of the attachment system, and the point at which the switch from more prefrontal, controlled to more automatic mentalizing occurs (Luyten et al., submitted manuscript). Dismissing individuals tend to deny attachment needs, asserting autonomy, independence and strength in the face of stress, using attachment deactivation strategies. In contrast, a preoccupied attachment classification or an anxious attachment style are generally thought to be linked with the use of attachment hyperactivating strategies (Cassidy & Berlin, 1994; Mikulincer & Shaver, 2007). Attachment hyperactivating strategies have been consistently associated with the tendency to exaggerate both the presence and seriousness of threats, and frantic efforts to find support and relief, often expressed in demanding, clinging behavior. In the context of this paper, it is important to note that AAI and self-report studies have found a predominance of anxious-preoccupied attachment strategies in BPD patients (Agrawal, Gunderson, Holmes, & Lyons-Ruth, 2004; Fonagy et al., 1996), although there is every indication that the two instruments are sensitive to different forms of psychological dysfunction (Riggs et al., 2007). In one study, 75% of patients meeting criteria for BPD fell into the rarely used subgroup of the AAI (E3): "fearfully preoccupied with respect to trauma" (Fonagy et al., 1996). In borderline patients we and others have noted a characteristic pattern of fearful attachment (attachment anxiety and relational avoidance), painful intolerance of aloneness, hypersensitivity to social environment, expectation of hostility from others, and greatly reduced positive memories of dyadic interactions (e.g., Gunderson & Lyons-Ruth, 2008).

INDIVIDUAL DIFFERENCES IN ATTACHMENT EXPERIENCES AND DEVELOPMENTAL PATHWAYS INVOLVED IN BPD

An important cause of anxious attachment in BPD patients is the commonly observed trauma history of these individuals. Attachment theorists, in particular Mary Main and Erik Hesse, have suggested that maltreatment leads to the disorganization of the child's attachment to the caregiver because of the irresolvable internal conflict created by the need for reassurance from the very person who also (by association perhaps) generates an experience of lack of safety. The activation of the attachment system by the threat of maltreatment is followed by proximity seeking, which drives the child closer to an experience of threat leading to further (hyper)activation of the attachment system (Hesse, 2008). This irresolvable conflict leaves the child with an overwhelming sense of helplessness and hopelessness. Congruent with these assumptions, there is compelling evidence for problematic family conditions in the development of BPD, including physical and sexual abuse (Bandelow et al., 2005; Battle et al., 2004; Bradley, Jenei, & Westen, 2005), prolonged separations (Soloff & Millward, 1983), and neglect and emotional abuse (Philipsen et al., 2008), although their specificity and etiological import has often been questioned. Probably a quarter of BPD patients have no maltreatment histories and the vast majority of those with abuse histories show a high rate of resilience and no personality pathology (McGloin & Widom, 2001; Paris, 1998).

The familiarity data on BPD is impressive. We know, for instance, that first-degree relatives of a BPD patient could be as much as 10 times more likely to have BPD than the prevalence of BPD in first-degree relatives of schizophrenic patients and explanations in terms of high genetic loading might provide an alternative account for the intrafamilial prevalence of trauma. Nevertheless, findings in support of an etiological role for trauma persist. One study reported a 2.5-fold increase in the risk of BPD for individuals whose mothers suffered a loss within two years of their birth, and a 5.3-fold increase for those with early maltreatment (Liotti & Pasquini, 2000). Maltreatment was implied as a cause in a study of emergent BPD features in school age children (Rogosch & Cicchetti, 2005). In one small longitudinal study, early maltreatment and disrupted parent–infant communication predicted BPD symptoms (Lyons-Ruth, Yellin, Melnick, & Atwood, 2005) and in a larger study verbal (emotional) abuse and neglect even more than physical maltreatment marked out those who went on to develop BPD (Johnson, Cohen, Chen, Kasen, & Brook, 2006). In addition, anomalies in parenting and anxious attachment have been suggested as a possible mediating mechanism between low socioeconomic status and BPD symptoms (Cohen et al., 2008). Early neglect may indeed be an underestimated risk factor, as there is some evidence from adoption and other studies to suggest that early neglect interferes with emotion understanding (e.g., Shipman, Edwards, Brown, Swisher, & Jennings, 2005) and this plays a role in the emergence of emotional difficulties in preschool and even in adolescence. We have suggested that one developmental path to impairments in mentalizing in BPD is a combination of early neglect, which might undermine the infant's developing capacity for affect regulation, with later maltreatment or other environmental circumstances, including adult experience of verbal, emotional, physical and sexual abuse (Zanarini, Frankenburg, Reich, Hennen, & Silk, 2005), that are likely to activate the attachment system chronically (Fonagy & Bateman, 2008). MacDonald and colleagues' (2008) recent observation of elevated posttraumatic stress disorder scores among those 8.5-year-old children exposed to violence who had been disorganized in their attachment with their mothers at 12 months of age is consistent with this suggestion.

We are thus suggesting that BPD symptoms entail an anomaly of coordination between frontal and posterior cortical function. There is some evidence for impairments in connectivity of neural systems for orienting to salient input as a key mechanism of the cognitive disturbance and poor impulse control in BPD from MRI studies (Rusch, Luders et al., 2007), EEG studies (e.g., Williams, Sidis, Gordon, & Meares, 2006), studies of brain injury (e.g., da Rocha et al., 2008) and epilepsy (e.g., Tebartz van Elst, 2005). fMRI studies of BPD patients which manipulated the background level of stress and/or attachment system activation (e.g., Minzenberg, Fan, New, Tang, & Siever, 2007) confirm the abnormal pattern of frontal deactivation and associated hyperresponsiveness of the limbic system. For example, Silbersweig and colleagues reported that under conditions of negative emotion and behavioral inhibition, BPD patients showed relatively decreased ventromedial prefrontal activity (including medial orbitofrontal and subgenual anterior cingulated) and increased amygdalar-ventral striatal activity correlating with decreased constraint (Silbersweig et al., 2007). Findings with implications for the HPA axis function have confirmed that BPD patients, at least those with explicit trauma history, show a reduction in pituitary size (Garner et al., 2007), elevated CSF levels of corticotropin-releasing hormone (Lee, Geracioti, Kasckow, & Coccaro, 2005), dysfunctions of cortisol responsivity (Jogems-Kosterman, de Knijff, Kusters, & van Hoof, 2007), and disturbed dexamethasone suppression test response (Wingenfeld et al., 2007). Buchheim and colleagues (2008), for instance, directly challenged the attachment system and examined the functional neuroanatomy of attachment trauma in BPD in a group of 11 female patients and 17 healthy female controls who were told stories in response to seven attachment-related pictures. These researchers found evidence for the hypothesized hyperactivation of the theory of mind system in response to attachment-related stimuli. BPD patients showed significantly more anterior midcingulate cortex activation in response to monadic pictures (characters facing attachment threats alone) and more activation of the right superior temporal sulcus and less activation of the right parahippocampal gyrus in response to dyadic pictures (interaction between characters in an attachment context) compared to controls.

Based on these findings, we propose that a combination of characteristics is likely to determine whether an individual "switches" in a particular context from more controlled reflective to automatic mentalization (see Figure 6.1). Anxious-preoccupied attachment strategies, characteristic of many BPD patients, are associated with a lowered threshold for attachment system activation and, simultaneously, a lower threshold for controlled mentalization deactivation. Thus, more automatic, subcortical systems, including the amygdala, have a low threshold for responding to stress in BPD patients. This hypothesis in and of itself could offer a comprehensive explanation for one of the central dynamic features of BPD patients, that is, their tendency to form attachments easily and quickly, often resulting in many disappointments. This pattern would be due to their low threshold for activation of the attachment system, and their low threshold for deactivation of neural systems associated with controlled social cognition, including the neural systems involved in judging the trustworthiness of others (Fonagy & Bateman, 2006). The vicious interpersonal cycles that are so characteristic of many BPD patients thus can be understood in terms of excitatory feedback loops leading to increased vigilance for stress-related cues in anxious attachment, particularly attachment characterized by high anxiety and high avoidance. These vicious cycles are also related to their hypervigilance concerning emotional states in others and their failure to distinguish between states of self and others, which further feeds into their lack of self-other differentiation, setting up a likely sequence of further failures in understanding their own internal world, that of others, and the relationship between the two.

In contrast, individuals who use attachment deactivation strategies are able to keep the neural systems involved in controlled mentalization on-line for longer, including neural systems involved in judging the trustworthiness of other individuals (i.e., the "pull mechanism" associated with attachment) (Vrticka et al., 2008). The distinction from securely attached individuals is clear. Secure individuals are able to keep the controlled mentalizing system on-line even in the context of increased stress, which is less likely to trigger the attachment system, while dismissive individuals, for whom mild stress is not likely to trigger the attachment system, may be able to keep mentalization going until the stress becomes severe and the deactivating strategy is likely to fail. If securely attached individuals are those who are able to retain a relatively high activation of prefrontal areas in the presence of the activation of the dopaminergic mesolimbic pathways (attachment and reward system), then differences in mentalization between securely attached and avoidantly/dismissively attached individuals may only show themselves under increasing stress, and this seems concordant with experimental studies.

Although their threshold for switching from controlled to automatic mentalization might be elevated, studies have shown that under increasing levels of stress, these deactivating strategies tend to fail, leading to a strong reactivation of feelings of insecurity, heightened reactivation of negative self-representations, and increased levels of stress (Mikulincer, Gillath, & Shaver, 2002). By contrast, a low threshold for the stress induced activation of the attachment system may translate as easy deactivation of the "pull mechanism" of attachment, and a low threshold for activation of the "push mechanism." In addition, we hypothesize that, if all other factors are constant, the greater an individual's use of hyperactivating strategies, the lower will be their threshold for the activation of automatic mentalization and thus the stronger the relationship between stress and a switch to automatic mentalization will be (Luyten et al., submitted manuscript). Moreover, we predict that greater use of hyperactivating strategies will also be associated with increased time to recovery of mentalization and that deactivating strategies might be associated with relatively rapid recovery of the capacity for mentalization, but these predictions remain to be investigated. However, this model would explain why mentalization deficits in BPD are more likely to be observed in experimental settings that trigger the attachment system, such as in studies collecting AAI narratives (e.g., Fonagy et al., 1996; Levinson & Fonagy, 2004) and also why BPD patients who mix deactivating and hyperactivating strategies, as is characteristic of disorganized attachment, show a tendency for *both* hypermentalization and a failure of mentalization. On the one hand, because attachment deactivating strategies are typically associated with minimizing and avoiding affective contents, BPD patients often have a tendency for hypermentalization, that is, continuing attempts to mentalize, but without integrating cognition and affect. At the same time, because the use of hyperactivating strategies is associated with a decoupling of controlled mentalization, this leads to failures of mentalization as a result of an overreliance on models of social cognition that antedate full mentalizing (Bateman & Fonagy, 2006). Similar conclusions have been drawn from an fMRI study in BPD patients where TAT cards elicited hyperactivation of the anterior cingulate and medial prefrontal cortices, suggesting an overly sensitive switch between emotionally salient and neutral information processing (Schnell, Dietrich, Schnitker, Daumann, & Herpertz, 2007).

Importantly, the switch from controlled to automatic mentalization involves the reemergence of more automatic and often prementalistic modes of thinking about internal states such as the psychic equivalence, the pretend, and the teleological mode of representing the internal world of oneself and others. While psychic equivalence makes subjective experience too real, the pretend mode severs its connection with reality and may even lead to dissociative experiences. The sense of emptiness commonly reported in BPD patients may be an indication of the occasional meaninglessness of subjective experience (Klonsky, 2008). The teleological mode, finally, refers to a mode of thinking that equates thinking about others' desires and feelings with observable behavior. For example, for many patients with BPD, one can only be loved if one is also physically touched.

For many individuals with somatoform disorders, one can only be sick if there is "objective proof" (e.g., medical tests) of one's complaints and sometimes, as in the case of bariatric surgery for obesity in individuals with sexual abuse, professionals respond to such demands teleologically (Morgan, 2008). Evidence for the continued influence on adults of developmentally earlier modes of thought is available from studies of reasoning "errors" (e.g., hindsight bias, "the curse of knowledge," "actions speak louder than words"; Blank, Nestler, von Collani, & Fischer, 2008), which have been used to illuminate the architecture of the belief-desire reasoning processes. The modes of social cognition that are characteristic of the ways of thinking of BPD patients can be understood as prementalistic ways of social reasoning which reemerge with the disappearance of controlled mentalizing. For example, women with BPD not only report higher levels of shame and guilt proneness, they also show greater shame proneness on implicit tests of self-concepts such as the implicit association test (Rusch, Lieb et al., 2007). Shame is felt as "more real" by these patients than anxious patients or normal controls and hence the stronger association with self-esteem and quality of life. The extent to which internal experiences are experienced as if they are real events relates to psychotic features identified in this group, which have been shown to be mediators between histories of childhood sexual abuse and suicidality (Soloff, Feske, & Fabio, 2008). Similar findings are also emerging in relation to anxiety sensitivity in these patients (Gratz, Tull, & Gunderson, 2008).

ATTACHMENT AND RESILIENCE IN BPD

It is well known that individuals with BPD have major problems dealing with adversity. This should hardly surprise us considering that the ability to continue to mentalize even under considerable stress is associated with so-called broaden and build (Fredrickson, 2001) cycles of attachment security, which reinforce feelings of secure attachment, personal agency, and affect regulation ("build"), and lead one to be pulled into different and more adaptive environments ("broaden") (Mikulincer & Shaver, 2007). Congruent with these assumptions, studies on resilience have shown that positive attachment experiences are related to resilience in part through relationship recruiting, that is, the capacity of resilient individuals to become attached to caring others (Hauser, Allen, & Golden, 2006). Hence, high levels of mentalization and the associated use of security-based attachment strategies when faced with stress might explain, at least in part, the effect of relationship recruiting and resilience in the face of stress (Fonagy, Steele, Steele, Higgitt, & Target, 1994). Attachment hyperactivation and deactivation strategies that are typically used by BPD patients, in contrast, can be expected to limit the ability to "broaden and build" in the face of adversity. These strategies have been shown to inhibit behavioral systems that are implicated in resilience, such as exploration, affiliation, and caregiving (Neumann, 2008). These findings may also partially explain BPD patients' difficulties in entering lasting relationships (including relationships with mental health care professionals) and the intergenerational transmission of psychopathology. Hence, when faced with adversity, they have no "security of internal exploration" to find adaptive ways to deal with adversity on their own, nor are they able to effectively recruit others to help them in such situations.

CONCLUSIONS

The mentalization-based approach to BPD aims to provide clinicians with a conceptually sound and empirically supported approach of BPD and its treatment. This chapter presents an extended version of this approach based on recently accumulated data. More specifically, we argue that, although developmentally it is highly likely that different pathways to BPD exist, they all have in common that they result in a low threshold for activation of the attachment system under stress. In combination with low thresholds for deactivation of the capacity for controlled mentalization, particularly with regard to differences in mental states of self versus others, this renders the interpersonal world of individuals with BPD incomprehensible, leading to a cascade of impairments in other aspects of mentalization. This explains BPD patients' propensity to become involved in vicious interpersonal cycles, characterized by marked affective dysregulation. Hence, disruption of the attachment system and identity diffusion closely linked to such disruptions, are seen as the core features of BPD. These are expressed in terms of interpersonal dysfunction and distress and high levels of impulsivity, and result in marked affective dysregulation, as well as feelings of inner pain, shame, and depression. To deal with these feelings, BPD patients rely on a number of maladaptive affect regulation strategies, including self-harm, substance abuse, or hypersexuality. All these involve the reemergence of nonmentalizing modes. These formulations translate into a coherent treatment approach, which may also inform treatment of BPD across various theoretical orientations.

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Chapter 7

CHILDREN OF PARENTS WITH SUBSTANCE ABUSE AND MENTAL HEALTH PROBLEMS

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Substance abuse among parents represents both a prenatal and a postnatal risk to a child's development. Children born to women who have substance abuse problems fall to great risk in terms of developing problems. Substance abuse during pregnancy may affect the child's central nervous system, and the adverse effects of prenatal alcohol exposure are especially well documented. Moreover, consumption of alcohol during pregnancy may lead to fetal alcohol syndrome (FAS) (Streissguth, 1997) or fetal alcohol spectrum disorders (FASD) (Sokol, Delaney-Black, Nordstrom, 2003; Hoyme et al., 2005). Furthermore, children who have been exposed to opioids, such as heroin or methadone during the fetal life, are at risk for suffering from neonatal abstinence syndrome (NAS).

Every year, an unknown number of children are born in Norway with problems that can be traced back to the use of alcohol and drugs by their mothers during pregnancy. Only a miniscule number of these children are identified and receive the particular care and attention that meet their needs. The reasons for this are complex and numerous. Knowledge and experience of how use of drugs and substances impact fetal development are lacking among health care professionals, and substance abuse during pregnancy is still an area that is kept under wraps and faces many taboos, causing it to be an area that is often left largely unexplored by various academics and professionals. Clinicians dealing with these issues often avoid setting a FASD diagnosis for the child in order to avoid stigmatizing mothers who themselves are vulnerable given their often complicated situations. In addition, there is still a lack of evidence-based interventions for these children and their families. Most of the children who are identified live in families where both parents have problems with illegal drug abuse of varying types, and these families also tend to have other problems that could challenge the upbringing of a child. The children of parents who suffer from alcohol abuse are to an even lesser degree identified, as having trouble with alcohol abuse often is a more concealed type of abuse and may occur among families from all kinds of socioeconomic backgrounds.

Even though a proportion of these children end up in foster care or become adopted, an increasing number remain with their biological parents. In Norway there has been a substantial growth in treatment opportunities for pregnant women and families with substance abuse problems the last 10 years. It is important to recognize that substance abuse itself is only one of risk factors for a child's healthy development. For example, we know that these children are more likely to be born prematurely and with low birth weight. Moreover, we know that many of the parents involved suffer from an array of mental health problems, like depression or other types of psychopathology, in addition to their substance abuse problems. Collectively, these factors may negatively impact parents' ability to be sensitive and emotionally available caregivers for their children.

In this chapter we will begin by describing the effects prenatal exposure to substances has on the development of a fetus and the central nervous system of the child, as well as how this reflects on the child later in life through the stages of toddler, small child, and later in childhood. Then we will discuss the importance seeing a child's issues from a background of several combined factors. Although prenatal exposure to drugs and substances is important, factors derived from the child's postnatal care environment also have a significant effect. An awareness of this complexity of factors is a key to tailoring the type of support and treatment many of these families will need. To conclude our work we want to emphasize the vital importance of employing treatment and support models that are comprehensive enough to consider all the aspects involved, including the substance abuse itself, any mental illness issues, parenting roles, self-help skills and last but not least the great need a child has to have caregivers available with the necessary levels of compassion, sensitivity and emotional availability.

THE EFFECTS OF PRENATAL DRUG EXPOSURE TO CHILDREN'S DEVELOPMENT

The brain development of a fetus is vast, and already at birth almost all brain neurons have already been formed. This logically means that the brain is especially vulnerable during pregnancy, and that any exposure to substances in this period may have adverse effects on the development path of the brain. This assumption is supported by, among others, MRI studies that have revealed the organic changes in the brain of children who are exposed to substances prenatal (Walhovd et al., 2007, 2010; Willoughby, Sheard, Nash, & Rovet, 2008).

In addition, there are animal studies that show how prenatal exposure may lead to organic changes in the brain. The advantage of animal studies is that they allow researchers to control for important variables, such as, type of substance, dosage, frequency of exposure, and the time during the pregnancy when the exposure has occurred. When examining children who have been exposed to substances in utero, it is not possible to control for these variables. The results and conclusions can therefore not directly be transferred from animals to humans (Rivkin et al., 2008). When dealing with humans, exposure to substances must always be viewed within a complex framework that includes aspects from genetics, toxicology and nutrition, where possible infections and unknown perinatal circumstances may play a role, not just as a direct effect of the substances (Dixon, 1994; Moe & Slinning, 2002).

People who struggle with substance abuse often consume multiple types of substances including narcotics, medication/psychopharmaca and alcohol. Many of these individuals also have a high consumption of tobacco products, which in and of itself poses a risk factor to the fetus. Smoking during pregnancy can lead to spontaneous abortion, growth problems and premature birth. Even a moderate consumption of cigarettes (5–10 per day) causes the blood circulation in the placenta to be reduced, which leads to a worsened capability of carrying oxygen in the body. Prenatal exposure to nicotine also increases the risk for cot death, and may result in the fall of cognitive functioning in addition to a range of behavioral problems and problems related to attention-deficit hyperactivity disorder (ADHD) (Frank, Augustyn, Knight, Pell, & Zuckerman, 2001; Stene-Larsen, Borge, & Vollrath, 2009).

PRENATAL EXPOSURE TO ALCOHOL

Out of today's most widely known substances, alcohol is the most harmful to a developing fetus. When a pregnant woman consumes alcohol, the fetus reaches the same blood alcohol content (BAC) as the mother, and sustains it for a longer period of time. The alcohol molecule is very small and passes through every cell in the body, with the fetus being no exception. The newly formed cells are especially vulnerable to alcohol, and they may die or change so that they cannot operate optimally. Although the correlation between the amount of alcohol consumed and the sustained effects (dose-response effect) has been well documented, it is true that some fetuses are more susceptible to the harmful effects of alcohol than others, and they can therefore endure lower amounts before neurological effects occur. This is part of the reason why a definite lower limit on alcohol consumption during pregnancy cannot be clearly determined.

FAS is characterized by symptoms that fall into three main categories: pre- and postnatal growth retardation, particular facial features and damage to the central nervous system (CNS). Effects on the CNS may be microcephaly (an undersized brain), hyperactivity, and problems associated with attention deficits. Various degrees of mental retardation is not uncommon. Children with the FAS diagnosis often have problems related to visuomotor skills, and trouble with verbal understanding. Only a fraction of those with severe alcohol-related effects, meet all the criteria to get a FAS diagnosis. Professionals in the field have therefore started using the term FASD instead, as this term more accurately describes the reality that prenatal alcohol exposure may show its effects within a spectrum of symptoms. FASD is an important term as it illustrates how a young child may suffer from exposure to substances even though classical signs might not be apparent, such as the typical facial features. Through spending sufficient time with the child, one will observe how he has trouble adapting to the surroundings and functioning adequately in a variety of situations. The child can have a mood that is unusually volatile depending on the day, he can be very unsettled, more sensitive and react more to changes and deviations in the daily routine or schedule than other young children. Sleep and food intake can differ significantly, and weight problems are common.

The majority of those who are given the FAS diagnosis are children and adolescents in foster care and those who are adopted. The diagnosis is often not given until the children start school when the demands on learning and adequate functioning in society have grown to a new level. At this stage, the problems the child faces are often severe; some can be traced back to the damages by the exposure to substances, while others are secondary or derived problems. This includes issues that develop because the child has not received help early on that is adapted to their needs given their primary problems. Studies done internationally show that children with alcohol-related injuries most often receive the diagnosis, ADHD. This is a limiting diagnosis, since it confines the child from getting all the necessary help it needs within all the areas possibly affected by exposure to alcohol and other substances. Individuals with FASD have more severe cognitive deficits in addition to attention-related, behavioral, social and medical problems. Heart and sight defects are common in this group.

Organic Changes in the Brains of Children Exposed to Alcohol in Utero

Alcohol is defined as a teratogen. This means that alcohol has the potential to cause fetal injuries. Microcephaly is one example. Both human and animal studies have shown that there are several specific areas of the brain that can have reduced size compared to those under normal development. This can apply to the hippocampus, cerebellum, basal ganglia and the frontal lobes. Among other things, the hippocampus is vital for memory and learning. A reduction in the hippocampus has been observed in rats after a single day of fetal alcohol exposure. A central function of the cerebellum is coordination, but it also plays a role in learning and memory. The basal ganglia are involved in both motor and cognitive functions. The frontal lobes are responsible for executive functions in the brain such as the ability to plan, organize, and execute actions. Moreover, a thinner cortex, along with too small or irregularly shaped corpus callosum, has been demonstrated. In addition to these types of structural injuries to the CNS, alcohol during pregnancy can also have an effect on brain cells and reduce both cell division and the creation of new cells. Furthermore, myelination (the process of insulating the nerve cells) can be affected (see Streissguth et al., 2004, for more information on prenatal alcohol exposure and its effects on the CNS).

MRI technology has been used to examine possible connections between symptomatic behavior and organic changes in the brain or injuries. For example, children with FASD often have difficulties with verbal memory, such as recalling what they have learned, and they have difficulties with orienting themselves in space (spatial memory). In one study, children with FASD were compared with children in a control group using cognitive tests and MRIs. Significantly lower total intracranial volume was found in the children with FASD and the hippocampus was especially affected. This was especially true for the left part of the hippocampus (Willoughby et al., 2008).

In another study, children diagnosed with FAS and children who had prenatal alcohol exposure but did not have all of the diagnostic symptoms of FAS were compared with a control group of children. All of the children were examined with an MRI and a battery of neuropsychological tests (Astley et al., 2006). The alcohol-exposed children, regardless of their FAS diagnosis, had significantly higher degrees of neuropsychological problems than the control group. Nevertheless, the children with an FAS diagnosis had the greatest problems out of the three groups. This study also found that the alcohol-exposed groups had significant reduction in total brain volume including the frontal lobes, hippocampus, caudate nucleus, putamen and corpus callosum. The children with an FAS diagnosis had the greatest reduction, but children with FASD also had significantly smaller size of these central parts of the brain than children in the control group.

How Many Children Are Born with Fetal Alcohol Effects in Norway?

International estimates indicate that between 0.5 and 2 of every 1,000 live-born children enter the world with such serious effects of prenatal alcohol exposure that they fill the criteria to be diagnosed with FAS (Astley, Stachowiak, Clarren, & Clausen, 2002; May & Gossage, 2001). Furthermore, it is presumed that at least 3–10 times as many children have alcohol-related effects that cause them to experience difficulties in most areas of daily life. These effects are more difficult to connect with prenatal alcohol exposure because they do not have the classic hallmarks of deformed facial crania (Stratton, Howe, & Battaglia, 1996). Based on international estimates, every year many hundred children in Norway may be born with effects of prenatal alcohol exposure. In light of this, it is interesting to read numbers from the Medical Birth Registry in Norway that show just 17 instances of FAS diagnoses were registered in the period from 1987 to 2005.

NEONATAL ABSTINENCE SYNDROME

Heavy drug abuse, especially where the mothers have used opioids such as heroin or medications like methadone or subutex, often result in serious withdrawal and regulation difficulties in newborn children (Hans & Jeremy, 2001; Lester & Tronick, 1994). Opioids transfer easily through the placenta and have effects on the fetus that are readily observable during the newborn period and can be expressed, among other things, as NAS. Several studies show that children with prenatal opioid exposure to substances like heroin and methadone have lower birth weights and reduced head circumference than children who were not exposed to drugs. Reduced birth weight and head circumference are presumed to be a result of stunted growth during pregnancy and not lower gestational age/being born too early (Hans & Jeremy, 2001). In a Norwegian study of children born to mothers who abused opiates, often combined with other substances, 25% of the children with prenatal drug exposure were born prematurely and had a birth weight under 2,500 grams. The drug exposed children had significantly lower head circumference than children in the control group even after correction was made for prematurity. A large majority of the children suffered from NAS (Moe & Slinning, 2002, 2004).

NAS is defined as a generalized disorder and has a clinical profile with symptoms that include irritability in the CNS and dysfunctions in the autonomic nervous system (ANS), in the esophagus and digestive system and in the respiratory system (Jones, O'Grady, Malfi, & Tuten, 2005; Kaltenbach, Berghella, & Finnegan, 1998). The most commonly used treatment tools for NAS were developed and standardized by Finnegan and colleagues in 1975 and revised for the first time in 1992 (a new revised version is expected sometime in 2010). The form charts to what degree the following symptoms occur: extreme crying, disturbed sleep, hyperactive motor reflexes, shaking/tremors, increased muscle tone, sweating, stuffy nose, sneezing, rapid breathing (respiration rate >60 per minute), regurgitation/severe vomiting, loose bowels, symptoms of failure to thrive and extreme irritability. Treatment depends on how severe the symptoms are, some have many and severe symptoms, while others have few and relatively mild symptoms.

NAS treatment often consists of a combination of pharmaceutical treatment with morphine or opium drops and adaptations in the environment. A central aspect of the abstinence syndrome is hypersensitivity to sound, light and touch. To avoid overstimulation that results in extreme anxiety and irritability in the newborns, the environment needs to be made a sheltered one. Personnel and caregivers also must have necessary knowledge of behavioral conditions and how different conditions guide when it is optimal to achieve contact and enter into interaction with the infant. Another central aspect of the environmentally adapted treatment is to identify and support the infant's emerging self-regulatory abilities.

Methadone-Exposed Infants

Methadone-exposed infants may display more serious NAS symptoms than infants born to mothers who used illegal heroin during pregnancy. Nevertheless, the grades of severity for NAS do not appear to be significantly related to the total dose of methadone taken by the woman during pregnancy (Bakstad, Sarfi, Welle-Strand, & Ravndal, 2009). The reason for this is unknown, but like exposure to other substances, the effect on different fetuses can vary based on various vulnerabilities in different children. It is also important to be aware that due to the long half-life period of methadone, withdrawal symptoms in the child often occur after 48–72 hours (Philipp, Merewood, & O'Brien, 2003). In the United States methadone is recommended as standard treatment for pregnant opiate addicts (National

Institutes of Health Consensus Development Panel, 1998). The main argument for this is that compared with pregnant women who do not receive treatment and who often continue to use illegal substances, it is documented that methadone treatment results in better prenatal care and fetal development along with reduced mortality. The situation in Norway is different from that in the United States. Substitution treatment with medication (methadone or subutex) is given, but there are alternative treatment options for pregnant women with drug abuse problems, especially residential treatment during pregnancy, and this is a preferred treatment form for many pregnant women struggling with drug abuse problems.

How Many Children Are Born with NAS in Norway?

Similar to figures concerning children born with FAS in Norway, we do not have definitive numbers on how many children are born with NAS. There are approximately 40 births among women who have been in substitution treatment annually. These women receive methadone or subutex during pregnancy. It has been demonstrated that around 60% of the children born to these mothers have had withdrawal symptoms that require treatment (Bakstad et al., 2009). We do not have exact figures on the number of births where the fetus has been exposed to illegal opiates and other drugs.

REGULATION DISTURBANCES, COGNITIVE DIFFICULTIES, AND ATTENTION PROBLEMS IN CHILDREN EXPOSED TO OPIATES AND MULTIPLE DRUG USE

The dramatic symptoms that characterize NAS diminish over the course of the first months of life, but it has been noted that even though withdrawal symptoms are a temporary phenomenon, in some cases they may indicate an underlying neurological vulnerability that appears in different ways over the course of development. Among other things, research has shown that many of these children continue to struggle with regulation disturbances and attention problems even after the withdrawal period has ended (Moe & Slinning, 2001; Slinning, 2004).

In the previously mentioned Norwegian study, 136 children were monitored from infancy until they turned 4.5 years old. The children were examined again at 9 and 10–11 years of age. Seventy-eight of these 136 children were prenatally exposed to multiple drug use in which heroin was the primary substance, and they had biological mothers who were serious drug abusers under many strains. A large majority of the children had NAS after birth, and many suffered from great regulation difficulties during infancy. Over the course of their first years of life, over 80% of the drug exposed children were placed in foster care or adopted. The children were examined a total of seven times for mental and motor development, psychosocial development and interaction between the caregiver and child until they were 4.5 years old. At all age levels, the results showed that the drug exposed children scored significantly lower than comparison groups in terms of mental and motor development. This was despite most of the children being placed in foster homes that were specifically selected to give vulnerable children customized care (Moe & Slinning, 2001; Slinning & Moe, 2007). Additional findings showed that at 4.5 years of age the drug exposed children also had specific changes in visual-motor and perceptual skills compared with the control group (Moe & Smith, 2003). Statistical analysis showed that these difficulties appear to be connected with a shorter gestation period, the child's ability to process information during the first year of life and the parents' social economic status. Visual-motor and perceptual skills are presumed to have neuropsychological components, and difficulties in these areas may indicate an underlying neurological weakness that cannot be modified to the same degree as language skills through environmental conditions (Moe, 2002). However, there was great variation among the drug exposed children at the individual level, though none fell within the mental retardation spectrum. In this group developmental gains were made during the first three years of life, something which may be connected with having a good caregiving environment. Unfortunately, the same gains were not observed when the children's development was examined at 4.5 and 9 years of age, respectively. As expected, the control group had about the same scores at each point of measurement.

When the children's socioemotional functions were concerned, it was shown that the drug exposed children had more behavioral problems than children in the control group, and that the behavior changed from internalizing problems to externalizing problems with increased age. At two years of age they were more withdrawn and anxious, while at four years of age they had a greater degree of attention and social difficulties. Markedly higher scores for ADHD-related symptoms were also found among children in the risk group than in the control group, and these problems were mostly expressed at preschool. These results may indicate that the drug exposed children had difficulties with self-regulation since they, in contrast to the control group, showed more problematic behavior at preschool than at home. This could mean that they had difficulty adjusting their own behavior in accordance with the demands of the situation, something that requires both cognitive abilities and the ability to regulate behavior, emotions and motivation (Slinning, 2004; Slinning & Moe, 2007).

One very interesting result from this study is that the prenatally drug exposed boys showed a greater vulnerability than girls until four years of age. It was the boys who scored lowest on average at the time of each measurement, while the girls who were drug exposed had an average that did not differ from the control group. It also showed that the boys' families had more frequent contact with the support system.

Organic Brain Changes in Children Exposed to Opiates and Multiple Drug Use

Animal studies have shown changes in the brains of rat offspring after prenatal exposure to opiates (heroin, methadone and morphine). A reduced density of neurons in the cortex has also been observed, at the same time as the nerve cells' creation of dendrites (branches that, among other things, ensure the connection between the different nerve cells in the brain) is significantly less in morphine exposed offspring than in offspring not exposed to morphine. It has been further indicated that both opiates and cocaine effect neurotransmitter systems (especially monoamine and dopamine transmitter systems) which are associated with the central nervous system's regulation of activation (arousal) and attention (Stanwood & Levitt, 2001).

There are very few studies of children who have been prenatally exposed to opiates and a combination of other drugs where examinations of the brain have been combined with examinations of behavior and development. One exception is our own Norwegian study where MRI (magnetic resonance imaging) examinations were conducted when the children were 10–11 years old (Walhovd et al., 2007). Possible group differences in morphometric cerebral characteristics were examined, and the results showed generally less brain volume in the drug exposed group than in the control group. The areas of the pallidum and putamen were especially hard hit. Reduced volume and injuries in these areas are associated with attention difficulties and hyperactivity in other groups of patients. In the drug exposed group of children we also found a connection between high problem scores for attention and social functioning at nine years of age and less thickness in the cerebral cortex in this area at 11 years of age. Possible group differences in myelination in the brain were also examined with the help of a technique called DTI (diffusion tensor imaging). DTI sequences provide a very detailed picture of the brain. Microstructural differences were found in areas of the brain's white matter in the drug exposed children. There can be several reasons for reduction of white matter, but one possible explanation is that prenatal exposure to drugs may have affected myelination, in other words the insulation of the neural connections in the brain (Walhovd et al., 2010).

As previously mentioned, people who struggle with drug abuse problems often use many different substances, including narcotics, medications and alcohol. This was also the case among mothers in the Norwegian study, even though most of them primarily took heroin. One question this raises is what effect this mixture of different drugs has on the child's central nervous system. In one MRI study conducted by Rivkin et al. (2008) prenatal exposure to cocaine, cigarettes and alcohol was found to have made independent contributions to reduced volume in subcortical gray matter (cgm) and other specific areas, including the putamen and pallidum. Another important finding in this study was that the combination of these substances can affect brain volume and have various effects on the brain structures of prenatally exposed children. This may indicate an accumulative effect of the different substances and possible synergetic effects of the different substances. Multiple drug use brings about effects that cannot be attributed to one particular substance, but likely must be considered to be a result of possible synergetic effects of different substances.

THE IMPORTANCE OF THE CAREGIVING ENVIRONMENT

In many studies of drug exposed children researchers have been mostly interested in finding direct teratological or toxic effects of different substances on the child's cognitive, motor, and behavioral development. This is a very important, but difficult project. To achieve a complete understanding of vulnerable children's needs, we must not overlook other mechanisms that can explain the connection between prenatal drug exposure and the children's development over time. This particularly applies to the importance of the children's postnatal caregiving environment.

Over the past decade there has been an increase in treatment options for drug-addicted pregnant women and parents of young children in Norway. Among other things, there are special addiction treatment institutions with particular responsibility for pregnant women and families with small children. Where pregnant women with serious drug problems are concerned, Social Service Law § 6–2a allows for forcible admission of the woman in order to protect the fetus. "It may be decided that a pregnant drug abuser, without her consent, shall be taken to an institution and held there if the abuse is of such a nature as to make it extremely likely that the child will be born with injuries, and if help measures in accordance with § 6–1 are not sufficient" (Søvig, 1999, p. 48). The conditions that must exist for the involuntary admission paragraph to take effect are, among others, that the abuse may result in injury to the fetus, and that there must be a causal connection between the abuse and the injury. Offers of substitution treatment, often with the medications methadone or subutex, have also become available over the course of the past decade. The increase in treatment options means that today these parents have greater opportunity to take care of their own children than was the case in the early 1990s when the Norwegian study that has been referred to previously was started. As was mentioned, 80% of the drug exposed children had their care taken over during their first year of life.

It is however, well documented that having drug abuse problems is often associated with a host of other risk factors that can affect the ability to be parents. These may be centered on poor somatic health and difficult sociodemographic conditions (Lester, Boukydis, & Twomey, 2000). Drug abuse during pregnancy is also often associated with mental health problems among expectant mothers. Amaro, Zuckerman, and Cabral (1989) found that women struggling with drug abuse are more likely to have a personal and transgenerational history of trauma and abuse; they are more likely to be exposed to violence and have experienced more negative incidents in life than women without drug abuse problems (Beeghly & Tronick, 1994). Numerous studies have documented high incidences of anxiety and depression, along with other serious mental illnesses in addition to little social support (Espinosa, Beckwith, Howard, Tyler, & Swanson, 2001; Luthar, Cushing, Merikangas, & Rousanville, 1998; Savonlahti et al., 2005). It is well documented that maternal depression is a risk factor for the development of the child (Murray, Fiori-Cowley, Hooper, & Cooper, 1996). During interaction with their children, depressed mothers show less reciprocity and synchronicity during interaction, and they fluctuate between being disengaged or intrusive. They are less aware of the child's signals, they can be intrusive, and they can attribute negative characteristics to the child. Children of depressed mothers have also been shown to have less adaptive abilities during interaction than other children (Luthar, D'Avanzo, & Hithes, 2003).

In order to understand what influences an infant's course of development, it is therefore appropriate to focus on the accumulation of risk factors in addition to taking the individual child's vulnerability into consideration. It is not usually isolated factors that make a difference in a child's life, but rather the accumulation of several risk factors in each individual family. The reason that individual factors, such as being low income may seem like a risk on their own, is that they are associated with several other underlying factors. For example, being low income often occurs in families with low levels of education and where there is only one caregiver. This can increase the risk for poverty and low ability to pay, something which may then lead to depression, and can influence the ability to be an emotionally available parent over shorter or longer periods of time (Sameroff & Fiese, 2000). A cumulative risk model emphasizes that the total number of risk factors a child is exposed to is critically important for predicting maladaptivity or poor development. It has been pointed out that it might be that some risk factors really stand out, for example, exposure to alcohol and illegal drugs during gestation. Yumoto, Jacobson, Joseph, and Jacobson (2008) studied two groups of children: one drug exposed group and one group that was not exposed to drugs. They found that four or five risk factors constituted the cutoff point for worse cognitive and behavioral development outcomes in the nonexposed group, while the drug exposed group demonstrated greater vulnerability at lower levels of environmental risks.

Looking at statistics of what may explain development over time in a group of children, differences in the individual characteristics of the person or the family will only explain a small portion of the variation in behavioral development. To be able to really understand which factors are meaningful for development, the surroundings that individuals and families live in have to be considered in their entirety. In other words, it is important to look at both the proximate factors (characteristics of the child like temperament and congenital neurological vulnerability, e.g., and the close interaction between the child and the parents) and the more distal factors (e.g., related to the parents' general socioeconomic status). It is well documented that distal risk factors such as poverty, low socioeconomic status and low levels of education among parents can put a child at double risk of a worse developmental outcome (Beeghy & Tronick, 1994). Jeremy and Bernstein (1984) examined a host of risk factors and protective factors that effected mothers' interactions with their infants and found that the total resources a mother had at her disposal predicted the mother's interactive skills better than to what degree she had a drug problem per se (Lester et al., 2000).

TRANSACTION AND INTERACTION

Earlier we pointed out several factors that can constitute a risk that parents with drug problems will struggle with in participating in interaction with their children in a way that is sensitive and promotes development. At the same time, it is important to emphasize that children also have various conditions for entering into interaction with their caregivers, and that drug exposed children may have neurobehavioral dysregulation that make them extra vulnerable to insensitive care.

Central to understanding every child's development is the mutual influence over time that takes place between the child and the social environment the child grows up in. Of course this also applies to children who are neurologically vulnerable, such as children who were exposed to drugs while in utero. The transaction model therefore represents a foundational way of understanding children's development (Sameroff, 2000). Within this understanding, children's development will not be viewed as a result of either the characteristics of the child or their environment alone. On the contrary, development is a product of the continually dynamic interaction between the child and the environmental experiences that the child has in his/her family and its social context over time. Therefore, this model emphasizes the child and the child's environment equally so that experiences in the environment cannot be seen apart from the child (Sameroff & Fiese, 2000).

At the outset, the processes that form the basis of normal development and development of psychopathology are the same, but because of different levels of vulnerability and different environments the development can go in different directions. Where children who have disturbances with a strong neurobiological component are concerned (such as children with FASD), development will be affected both by the child having a difficulty, and by how the interaction transpires over time (transactions through the caregivers interpretation and response, and the influence of the surrounding environment).

Lester and Tronick (1994) have developed a systemic model that is useful for understanding all of the factors that influence the relationship between mothers with drug problems and their children. This systemic model shows the importance of taking into consideration the entire parent–child system and the circumstances around them. The authors emphasize that focusing exclusively on the mother or father as a drug abuser, or solely on the child as drug exposed, does not take into consideration the transaction processes between parent and child in understanding the development of the child over time. The systemic model shows that being a drug abuser is often an indicator of a total lifestyle. This may imply an atypical form of care and interaction that is not very sensitive. This can have a negative effect on a child's development even without drug exposure.

NEED FOR COMPREHENSIVE TREATMENT MODELS: THE PARENTAL ROLE, MENTALIZATION, AND INCREASED SENSITIVITY IN INTERACTION

Both clinical experiences and various studies indicate that interventions aimed solely at the drug problem, or at the drug problem in combination with guidance on parental skills, does not have sufficient effect when one looks at actual interaction between mother and child (Pajulo, Suchman, Kalland, & Mayes, 2006). This is likely due to the treatment not adequately having resulted in increased sensitivity to what the child needs in the interaction. Consequently, to bring about changes that also have a positive effect for the child's development, it is very important that the treatment is focused on the observable interaction between parent and child, and that it contributes to helping parents to become more sensitive to the child's signals and to respond accordingly (Hans, Bernstein, & Henson, 1999). At the same time, it is important to help the mothers increase their capacity for self-regulation, empathy, and tolerance of stress. This way mothers can become better at regulating their children's behavior and feelings. Better conditions for interaction between mother and child occur when mothers receive treatment for depression or other psychological problems (Olson, O'Connor, & Fitzgerald, 2001) and become emotionally available to their children.

In one study of pregnant women and mothers who were in residential treatment with their children at an addiction treatment center, it was found that focusing on the relationship between mother and child was a decisive factor in obtaining a good treatment outcome. It was shown that this resulted in positive outcomes both in relation to remaining drug-free and to mastering the parental role better (Pajulo et al., 2006). Work on the relationship with the child was started during pregnancy by making the mother conscious of the child in her belly through practical preparations such as finding a name for the child and by helping her to envision how the child would turn out. This mentalization work during pregnancy is believed to encourage later interaction between mother and child. In addition, the expectant mother got help to recognize her own ambivalent feelings and to work on her anxiety and depression. After birth the mother received support to reflect about the child's intentions, behavior and feelings and to view these as meaningful. An important part of the treatment was that the therapist contributed to the mothers reflections on the experiences she has had together with the child and to give them meaning. The relationship between the mother and the therapist is supposed to be accepting, and the therapist should accommodate both the mother's positive and negative feelings relating to the child. A very important aspect of supporting the mother's reflective functioning is to help her better understand the child and what the child is expressing and feeling. This way of working, both with the mother's inner representations and her interaction with the child, is aimed at increasing the mother's sensitivity and her reflective functioning or ability to mentalize (Fonagy, 2006; Sadler, Slade, & Mayes, 2006).

Increased sensitivity is an important factor to work on, as mothers with drug problems often have less ability to read the child's signals and a reduced capacity to manage a child who is hard to regulate. They may also feel more easily rejected by the child and have little self-confidence in their role as parents. Many have not experienced caring parents in their own lives, and are therefore dependent on support and help to learn how they can give good care to their own child. Insensitive care is found to be related to disorganized attachment patterns in the child, which in turn is associated with development of internalized difficulties during the ages of preschool and school (Espinosa et al., 2001). To prevent the child from developing an insecure attachment to the caregiver, it is important to work on the dyad between the child and the caregiver regardless of whether the child is living with his/her biological parents, in a foster home or in an adopted family. It can be difficult to obtain good interaction with a child who mainly shows negative affectivity, is difficult to regulate and does not give clear signals. It is therefore key that the parents receive help with how they should respond to the child, be emotionally supportive and stimulate development.

HELP TO SELF-HELP

Another important aspect of treating and rehabilitating drug-addicted parents is training in self-help skills. Many have been on drugs for many years and therefore have not acquired basic knowledge of things like financial management, food preparation, nutrition and cleaning. In recent years there has been more awareness that this is among the key aspects of treatment, and that it is an important prerequisite for being able to manage on one's own later on. More treatment institutions now give their residents responsibility for practical tasks such as common meals. In addition, they are given responsibility for their own apartment in preparation for living on their own after their stay at the institution. They are also given training in things like using online banking, making food, cleaning, and so on.

An important factor in being able to function in society is access to education and later opportunities for employment. Many who struggle with drugs have discontinued their schooling. Getting help and the chance to get an education or a job is important for being able to function in society and also contributes better economic conditions. Through education and employment chances also increase for building new relationships and creating a network that represents resources and support. This is also totally decisive in preventing isolation, something which can lead to depression and a return to drug abuse.

THE IMPORTANCE OF EARLY INTERVENTION AND FOLLOW-UP OF THE CHILD

To advance a positive prognosis for the child, intervention must take place as early as possible, and the family's combined needs must be mapped out and taken care of. Parents/foster parents, preschool staff and teachers must be given knowledge and training on how they can best adjust daily life for the child. Getting a thorough understanding of the child's resources and difficulties is completely decisive for how they are met and understood by the people around them. An example of intuitive parental behavior is to pick up and rock a child who is crying. This can be counterproductive for a drug exposed child who is often very sensitive to touch and easily overstimulated. An anxious and crying child can become further anxious with rocking and talk. What is needed is concrete information about how hypersensitive children will calm down best when packed tightly in a blanket or comforter and be protected from overwhelming stimuli.

As has been shown, children with FASD face a host of difficulties. We know that access to early intervention is a protective factor that improves the long-term developmental prospects for vulnerable children. This is also the case for individuals with FASD and other types of substance exposure (Frank et al., 2002; Streissguth, Barr, Kogan, & Bookstein, 1996). The child's cognitive, motor, and social resources should be mapped out in order to be able to start appropriate help as early as possible. Special pedagogical follow-up will be of central importance when the child starts going to preschool, and will be necessary throughout the entire period of schooling. It is also important to create understanding in the surroundings that the child is struggling even though the injuries in many cases are not very visible. Furthermore, somatic examinations should be a part of the treatment plan for drug exposed children because effects on the senses such as poor vision or hearing may result from prenatal alcohol exposure.

There is still a lack of evidence-based intervention programs for children with FASD (see Chandrasena, Mukherjee, & Turk, 2008). Based on these circumstances, in 2001 the Centers for Disease Control and Prevention in the United States provided financial support to develop interventions that were specially designed for children with FASD and their families. Funding was offered to five different projects with a goal of developing interventions targeted at typical difficulties faced by children with FASD (see Chandrasena et al., 2008). The overarching goals for every type of intervention program was to support positive cognitive development in individuals with FASD, reduce secondary difficulties and improve the lives of families who live with children with FASD. Most of these interventions were however worked out for school age children, and also partially for children of preschool age. Nonetheless, there are clearly common elements from these programs that are useful and can be transferred to interventions for families with infants and toddlers. Among other things, emphasis was placed on the great importance of supporting caregivers of children with FASD. The programs varied some, but many of them had in different ways psychoeducational elements aimed at parents on the one hand and emphasis on interaction treatment to bring forth good social development in the children on the other. Where psychoeducational content was concerned, it was centered around help functions that can be found for parents with children who have a "hidden" handicap like this. At the same time, emphasis was placed on the importance of shaping a caregiving environment for these children which is emotionally close, well-structured, overviewable and stable (Streissguth et al., 2004).

CONCLUSION

Today it is well documented that children who are exposed to alcohol during pregnancy are at risk of developing difficulties, and that this can lead to FASD (Hoyme et al., 2005; Sokol, Delaney-Black, & Nordstrom, 2003). Nonetheless, very few children are identified. There is further documentation that children who are exposed to opiates and other drugs during pregnancy are also at risk for imbalanced development and organic brain changes, even though the neurobehavioral effects do not appear to be as extensive as those in children with alcohol-related birth defects (Slinning & Moe, 2007; Walhovd et al., 2007; Walhovd et al., 2009).

At the same time, there is a continued lack of knowledge among professionals who work with child and youth psychological health in Norway about the effects of alcohol and drugs on the fetal brain and what characterizes children with prenatal substance-related difficulties. This reduces the chances for children and parents who struggle with these kinds of difficulties to get the right diagnosis and help. Evaluations of this group of children are often too narrow in relation to the numerous functional areas that may be affected.

As we have pointed out, there has been an increase in treatment options for pregnant women and parents with small children who are struggling with alcohol and drug problems in Norway. The challenge for support systems lies in developing comprehensive treatment models that meet the child's need for good care and at the same time prepares the parents to live a drug-free life. Furthermore, we know that many of the parents who struggle with alcohol and drug abuse also have psychological difficulties such as depression or another type of psychopathology which may influence their ability to be sensitive caregivers. Alcohol and drug abuse among parents is also a complex and complicated problem that influences both child and parent in many ways. This shows that there is a need for integrated treatment models that focus on the drug abuse, psychological difficulties, the parental role, self-help skills and not least, the child's special need for sensitive and emotionally available caregivers.

In spite of better treatment options for biological parents and children together, we know that some of these children will end up in a foster home or be adopted. Even though foster parents and adoptive parents are often caregivers with many resources, it is important to emphasize that these parents may also have extra need for support as caregivers for vulnerable children with special needs.

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Chapter 8

SLEEP DISTURBANCES AND CHILDREN'S WELL-BEING

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Even though the fundamental function of sleep still remains to be determined, accumulating evidence shows the negative consequences of inadequate sleep for health and well-being. Although our knowledge is mainly based on adult studies, research on children's sleep disturbances has also been importantly increasing over the last decade and the studies have pointed out both similarities and differences among children vs. adults. This chapter gives an overview on the recent findings pertaining to children's sleeping difficulties and their etiology as well as the significance of adequate sleep in children's well-being.

SLEEP DISTURBANCES IN GENERAL

Sleeping difficulties range from simple and minor behavioral sleep problems to more severe disturbances with a definitive biological background, such as obstructive sleep apnea or narcolepsy, and they occur frequently during the entire childhood. Epidemiological studies have shown that approximately one third of all children suffer from sleeping difficulties, although the reported prevalence rates vary largely across different studies. The varying rates are likely to reflect differences in the measurement instruments (i.e., varying questionnaires or informants have been used), the research methodology (i.e., the measurement is based on interviews, questionnaires, actigraphs, or polysomnographs) and the definitions that have been set for sleeping difficulties (i.e., the cutoff criteria for sleep disturbances, or the severity of the disturbance).

Sleep disturbances are particularly common in children and adolescents with psychiatric or neurological disorders. For example, depression and anxiety often express themselves as sleep disturbances, most typically as insomnia or hypersomnia. Moreover, various neurological conditions, such as attention-deficit/hyperactivity disorder (ADHD), developmental delay, autism, or Asperger syndrome are also associated with a higher risk for sleeping difficulties, typically frequent nocturnal awakenings or behavioral sleep disturbances. In such a case sleeping difficulties are considered secondary and they overlap the other behavioral symptoms of the underlying neuropsychiatric disorders. Yet, sleep disturbances owe potential to worsen the behavioral symptoms and exacerbate the course of the primary disorder, and therefore treatment of sleep disorders is usually indicated regardless of its etiologic background. Improvement in sleep quality often leads to amelioration of the behavioral symptoms and improvement of mood.

SLEEP DISTURBANCES IN INFANCY

The childhood sleep disturbances closely reflect the child's developmental level, and therefore the typically manifesting sleep disturbances are specific for the age group and developmental level.

Newborn babies sleep approximately 16 hours a day. The interindividual variation is, however, large and some individuals may sleep up to 20 hours a day, while others can sleep as little as only 12 hours a day. The practical significance of this large variation is not known, but as sleep requirements vary between individuals, the observed variation in early life may at least in part reflect the inborn need for sleep which is thought to be genetically determined. On the other hand, it may also carry some clinical significance as short sleep duration at the age of two years and onward has been linked with lower cognitive performance at the age of six years (Touchette et al., 2007).

Sleep structure is immature during the first months of life, and the five sleep stages that are defined in adult's EEG (light sleep stages SI-II, deep sleep stage SIII-IV, and REM sleep) have not evolved yet, but already during the last trimester of pregnancy two sleep stages, active sleep and quiet sleep, can be distinguished. According to the new classification by the American Association of Sleep Medicine (AASM), three sleep stages are defined in infancy: light sleep (stages NI-II), deep sleep (stage NIII), and REM sleep (stage R). By the age of six months the five sleep stages gradually differentiate along with the maturation of the central nervous system. One sleep cycle is shorter in infancy than later (60 minutes vs. 90 minutes among older children and adults). Early childhood is characterized by particularly high proportion of REM sleep, which has raised discussion over the role of REM sleep in promotion of the brain development and neurological maturation. The ontogenetic hypothesis of the function of REM sleep suggests that REM sleep would be particularly important for the neuronal maturation during the fetal period as the sensory input that stimulates neuronal activity is minimal in the uterus. While there are also many other more or less supported theories on the function of REM sleep, animal studies show that early REM sleep deprivation is related to poorer neuronal development and plasticity (Shaffery, Sinton, Bissette, Roffwarg, & Marks, 2002).

Sleep periods of the newborn infant are relatively short (two to four hours) and they are distributed evenly throughout the day without clear differences between the day and night. During the first six months, also the circadian rhythms evolve. Sleep-wake rhythms are controlled by the biological clock of the brain in the suprachiasmatic nuclei. Although the fetal suprachiasmatic nuclei show rhythmic activity already during the last trimester of pregnancy, the earliest signs of diurnal sleep-wake rhythms, such as rhythmicity in melatonin and cortisol secretion, start to show up no earlier than the age of two to three months (Rivkees, 2003). Thereafter the longest sleep periods will be centralizing at night and the longest wake periods during the day. Nocturnal awakenings, however, remain common till the age of two years.

The most typical sleep disturbance in early childhood (age less than one year) is the sleep association problem, a condition in which the child is habitually occupied with certain practices at sleep onset and is unable to fall asleep in the absence of this set of circumstances. When the child is unable to fall asleep on his or her own, he or she will awaken the parents at night between the physiologically occurring awakenings between two sleep cycles. These awakenings can be exhaustive for the entire family particularly when the child repetitively wakes up in the middle of night crying and requiring immediate parental soothing. The babies who are early self-soothers (i.e., can fall asleep without parental support), tend to be better sleepers at the age of one to two years than the signalers (i.e., those who cannot fall asleep without parental support). Moreover, nocturnal awakenings and difficulties with circadian rhythms are also common in this age group, but they merely reflect immaturity of the central nervous system, and do not necessarily represent true deviations from normality.

Etiology of Sleep Disturbances in Infancy

The sleep disturbances in infancy reflect a multitude of etiological factors covering biological (i.e., developmental), environmental and genetic factors. The larger tendency for nocturnal awakenings in early childhood reflects mainly biological factors: the shorter length of the sleep cycle (about one hour; awakenings are most likely to occur between the sleep cycles), the higher proportion of REM sleep in younger (vs. older) children (the awakening threshold is lower from REM sleep than it is from deep sleep) as well as the immaturity of the circadian system.

In addition, many inherited factors, such as temperamental traits are related to the vulnerability for sleeping difficulties. Rhythmicity, for instance, is considered an essential temperamental dimension in early childhood. Some infants show a higher tendency toward regular rhythms than other infants. Irregular infants will require more parental support to be able to develop and maintain diurnal rhythms, while infants who have an inborn a tendency to regularity, may be able to develop such a rhythm of their own or with lower amount of parental guidance.

Even though the maturation of sleep-wake rhythm is under rigorous neural control, a vast range of environmental factors can intervene it and give rise to sleep disturbances. For example, some adverse features in parenting, such as inconsistency in child care, and ambivalence toward infants' demands as well as experienced insecurity in parenting are related to higher tendency for nocturnal awakenings (Morrell, 1999), but as the study was cross-sectional, the cause-effect relationship cannot be determined. When the infant is irregular and sleeps poorly, difficulties in parenting are more common and they can further impair maternal self-esteem.

Adverse parenting practices and negative attitudes can also reflect maternal psychiatric illness. For example, maternal anxiety and depression have been linked with infant's sleeping difficulties. Traditionally, maternal depression was thought to impair the child–parent relations, which could also manifest as sleeping difficulties. However, the causal pathways are more complicated than just that, because frequent nocturnal awakenings provoked by infant's crying could also impair maternal mood. Studies with experimental sleep restriction have shown that both chronic lack of sleep as well as experimental fragmentation of sleep can affect mood and bring out depressiveness in healthy adults (Bonnet, 2000). In these lines, infant's sleeping difficulties were found to be associated with maternal depression only when both the mother and the infant suffered from sleeping difficulties (Hiscock & Wake, 2001) and most importantly it has been noted that treatment of infant sleeping difficulties does not only consolidate infants' sleep but also reduces maternal depressiveness (Hiscock, Bayer, Hampton, Ukoumunne, & Wake, 2008), which suggests that infants' midnight awakenings can also directly affect maternal mood. The relationship between maternal depression and infant sleep is thus likely to be bidirectional.

Bedtime practices have also been linked with sleeping difficulties. For example, active physical comforting and parental presence at bedtime increase the risk for nocturnal awakenings (Morrell & Steele, 2003). Infants who were put to crib awake and were able to fall asleep without parental support were more likely to sleep through the night at the age of one to two years than the other infants (Burnham, Goodlin-Jones, Gaylor, & Anders, 2002). However, at the age of one month most infants are nursed to sleep and the proportion of these infants gradually decreases, which means that most infants are with age able to learn how to fall asleep on their own. Less well known is why some infants are not able to learn self-soothing.

The ability to self-sooth might reflect the infant's attachment style because it seems to contribute the persistence of sleeping difficulties (Morrell & Steele, 2003). Not only the infants' attachment style and but maternal attachment style, too, may play a role. For example, insecure maternal attachment style (Morrell & Steele, 2003) increased the risk for sleeping difficulties among infants. This risk might be mediated via parenting practices, as it has been reported that securely attached infants, determined using the Strange Situation test at the age of one year, had mothers who tended to be more consistent, more sensitive, and more responsive during the nighttime than the mothers of insecurely attached infants (Higley & Dozier, 2009).

Somatic factors are one important etiology of sleep disturbances in infancy. Somatic illnesses, like allergies and infections can manifest themselves as crying and difficulties to settle down and a higher tendency toward nocturnal awakenings. Painful sensations (i.e., ear infection, gastroesophageal reflux), itching and breathing difficulties may also interrupt sleep. Sleep-disordered breathing is a rare but important cause for difficulties in sleep continuity in infancy.

SLEEP DISTURBANCES AMONG TODDLERS

Bedtime problems and nocturnal awakenings are the most typical sleep disturbances among toddlers. While bedtime struggles are often accompanied with prolonged sleep onset latencies, actual difficulties with sleep initiation are less common. Night wakings, in turn, mainly reflect the immaturity of the central nervous system and they are usually not deviations from normality. As many as a half of the children may wake up one to two times a night until at least the age of two years.

In this age some children will also start to suffer from parasomnias, such as sleep terrors, sleep talking and sleep walking (Kotagal, 2009). They are partial awakenings from specific sleep stages, most typically from deep sleep. Sleep terrors, for instance, result from difficulties to leave deep sleep between the two sleep cycles; during the event the child is confused and agitated, unable to communicate with the parents and not consciously aware of the surroundings. After the event, which typically lasts few minutes, the child falls back to deep sleep. They are typically occasional, not very severe from the intensity, and they are usually not related to adverse daytime consequences.

Sleep-disordered breathing also occurs frequently in this age group and it typically manifests itself as restless sleep, tossing and turning, and profuse sweating is also a typical for the condition. Consequences to daytime functioning can be considerable and sleep fragmentation can impair both cognitive and psychic well-being.

Etiology of Sleep Disturbances among Toddlers

In this age group, difficulties at bedtime are typically maintained by ineffective parental control and inconsistent routines at bedtime. They can also reflect anxiety and fears at bed time. Difficulties in the child–parent interaction, family conflicts and negative emotions are also common in families with poorly sleeping children.

Environmental stress factors or chronic lack of sleep can also increase risk for sleeping difficulties or parasomnias. In vulnerable individuals, sleep deprivation seems to increase tendency for disorganized sleep states during state transitions: both experimental restriction of sleep and forced arousals in adults with a history of sleep walking lead to exacerbation of the symptom (Pilon, Montplaisir, & Zadra, 2008). Certain sleeping habits are also related to sleep disturbances; in this age group cosleeping in particular is related to nocturnal awakenings and difficulties in settling down. As many as 35% of five- to seven-year-old children still come to their parents beds many nights a week (Smedje, Broman, & Hetta, 1999). However, cosleeping is not necessarily the primary cause for the sleeping difficulty, as it can also reflect parental reaction to the child's sleeping difficulties (Simard, Nielsen, Tremblay, Boivin, & Montplaisir, 2008).

In addition, certain temperamental traits, particularly "difficult temperament" which is characterized by intense and negative emotionality, is linked with sleep disturbances in this age (Owens-Stively et al., 1997). Genetic factors can thus also play a role, even though in this age group they remain poorly characterized.

Interestingly, prenatal factors too, may have an own, albeit minor, role in tendency for sleeping difficulties both in early childhood and even later in adolescence. For example, small birth weight, artificial labor, bleeding during pregnancy, prenatal exposure to unprescribed medication or caffeine were linked with sleeping difficulties at the age four to nine years (Shang, Gau, & Soong, 2006).

Large adenoids and tonsils are the main cause of snoring and sleep-disordered breathing in this age group. Allergic rhinitis is also more common in snoring children.

SLEEP DISTURBANCES IN SCHOOL-AGED CHILDREN

In school age and adolescence, insomnia becomes the most common sleep disorder. Primary insomnia is characterized by chronic difficulties with onset and/or maintenance of sleep. It is a symptom that often reflects stress in daily life or other adverse life conditions, such as irregular sleeping habits, use of stimulants, too little exercise, and so on. It may also be related to various underlying neuropsychiatric conditions, such as depression or anxiety disorders, or other medical conditions, like substance abuse or somatic illness.

Circadian rhythm disorders are the most important diagnostic alternatives for insomnia, delayed sleep phase syndrome being the most common circadian rhythm disorder. It is characterized by a phase delay of the circadian system, which manifests as a tendency to stay up late in the evening due to difficulties to fall asleep early enough in the evening. It leads to chronic lack of sleep, showing up as difficulties in waking up in the morning in accordance with the school schedules, as well as daytime tiredness and other behavioral symptoms of sleep debt.

Even though inadequate sleep often results from sleep disturbances, it can also arise without any sleep disturbances and be a consequence of inadequate bedtimes. This condition is called as behavioral restriction of sleep. It is an important and prevalent source for inadequate sleep in adolescence. As the sleep needs vary across individuals, not all short sleepers suffer from chronic lack of sleep. Recognition of those who need more sleep requires an experiment where the length sleep is extended. If chronic sleep deprivation has been a problem, daytime functioning, feelings and behavior will improve along the improvement in sleep duration or sleep quality.

Certain somatic entities can also cause sleep disturbances. Previously mentioned snoring and sleep-disordered breathing are still occurring in adolescence and another important disorder is narcolepsy which tends to break out in youth. Prominent daytime sleepiness is the main feature of narcolepsy but fragmented sleep is almost as typical. Cataplectic attacks are also considerable problem. Narcolepsy is often misdiagnosed as ADHD or learning disturbance.

Etiology of Sleep Disorders in School-Aged Children

In school age, sleeping difficulties typically reflect environmental risk factors that range from irregular bedtimes and poor bedtime routines to use of caffeinated beverages and stress at school. Excessive playing of computer games and watching TV are also related to sleeping difficulties (Paavonen, Pennonen, Roine, Valkonen, & Lahikainen, 2006). High exposure to electronic media in school age predicted sleeping difficulties even several years later, in early adulthood (Johnson, Cohen, Kasen, First, & Brook, 2004).

Interpersonal difficulties are also typical in adolescents with insomnia and difficulties to fall asleep. Moreover, negative parenting increases risk for lower sleep quality, negative mood, anxiety and sleepiness (Brand, Hatzinger, Beck, & Holsboer-Trachsler, 2009). Even poor parental sleep quality poses a risk for adolescents' sleep disturbances (Boergers, Hart, Owens, Streisand, & Spirito, 2007), although this risk might be mediated via negative parenting practices (Brand, Gerber, Hatzinger, Beck, & Holsboer-Trachsler, 2009).

In addition, various traumatic experiences as well as adverse childhood experiences, such as family conflicts have been linked with sleep disturbances both in school-aged children (Gregory, Caspi, Moffitt, & Poulton, 2006) and even later in adulthood (Bader, Schafer, Schenkel, Nissen, & Schwander, 2007), suggesting that childhood stress may have persistent influence on sleep and its quality. Finally, even in this age group attachment style can be part of the sleep problem. For example, preoccupied attachment style was related to poor sleep quality among adults (Niko Verdecias, Jean-Louis, Zizi, Casimir, & Browne, 2009).

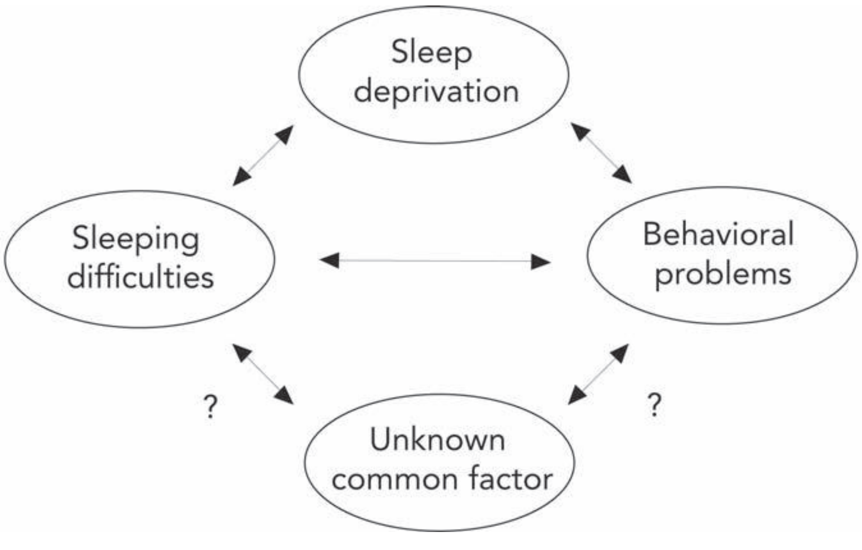
Twin studies have suggested that environmental factors play a larger role in sleeping difficulties than genetic factors, even though they too contributed to the risk (Gregory et al., 2006). Although the genetic factors that predispose to sleeping difficulties are poorly defined in adolescence, circadian preference (eveningness in particular) is one inherited factor that has been linked with various sleep problems among adolescents (Gau et al., 2007).

Interestingly, prenatal factors are related to sleeping difficulties even up till adulthood. For example, very low birth weight has been linked obstructive sleep apnea and snoring both in adolescence and early adulthood (Paavonen et al., 2007). Prematurity could affect the growth of the airways or the neuronal mechanisms that control breathing during sleep. Prematurity is also associated with earlier bedtime (Strang-Karlson et al., 2008) and the morning chronotype, particularly in premature infants with normal birth weight, that is, those without intrauterine growth restriction (Strang-Karlsson et al., 2010). Although it is not known what the underlying mechanism is, one possibility is that insults in early life may affect the later rhythmicity through programming of the fetal suprachiasmatic nucleus or the amplitudes of melatonin secretion. On the other hand, sleep disturbances may not be related to prematurity itself, but they could also indirectly reflect other factors related to prematurity, for example, treatment at the intensive care unit or familial factors, such as child–parent relationship in early childhood.

SUMMARY OF THE ETIOLOGY OF SLEEP DISORDERS

To summarize the previous discussion, sleep quality reflects multifactorial background where the risk and protective factors construct an interactive and dynamic network which has components of genetic, biological, and environmental factors and where the cause-effect pathways are often bidirectional (Figure 8.1). In part, sleep disturbances also indicate risk for

Figure 8.1
A theoretical model of the interplay between sleep and behavioral problems



biological vulnerability for neuropsychiatric disorders; it is a nonspecific correlate of the risk, but the interplay of genes and environment, including gene–environment interactions (G × E) and gene–environment correlations (rGE), is also likely to have a role in this complicated relationship. A comprehensive etiological model to explain the risk for sleeping difficulties thus essentially reflects the interplay of environmental and biological factors although the factors that regulate the interplay of environmental and biological factors still remain to be determined.

While the recognition of the risk factors is an important step in understanding causal processes, it is not equivalent to it because the various risk factors can also mirror each other at least to some extent, for example, the effects of parental depression might be mediated via difficulties in parenting and the risks related to cosleeping might reflect the child's inborn difficulties to settle down. Children's sleep quality does not only reflect genetics and the child–parent interaction but environment even more diversely—cultural factors also affect families' sleep practices, parenting and attitudes toward sleep.

WHY IS SLEEP IMPORTANT FOR CHILDREN?

In number of adult studies, short sleep duration and sleeping difficulties, such as insomnia or obstructive sleep apnea, have been linked with negative health outcomes. Poor and short sleep, for example, worsen the glucose tolerance and increase the levels of stress hormones and risk for obesity (Spiegel, Tasali, Leproult, & Van Cauter, 2009) while obstructive sleep apnea has been linked with heart failure and hypertension (Bradley & Floras, 2009).

However, there is a relative lack of studies assessing the significance of adequate sleep among children. For example, the long-term significance of normal sleep-wake rhythm development is poorly characterized, and the significance of the interindividual variability in the sleep structure and its maturation for the neurological and psychological development has not been established.

The consequences of inadequate sleep can be quantitatively in children from those reported among adults, because the need for sleep is larger in early life than later and it can make children particularly vulnerable to the consequences of inadequate sleep. For example, the impact of fragmented sleep was strongest among the youngest children (Sadeh, Gruber, & Raviv, 2002). As sleep is the primary activity of developing brain, an average three-year-old, for instance, has spent more time asleep than in all waking activities, sleep may be even more important for children than it is for adults.

The immaturity of the behavioral compensatory mechanisms can also modify the manifestations of sleep deprivation in children and therefore the consequences of inadequate sleep can be qualitatively different among children as compared to those in adults.

HOW MUCH DO WE NEED SLEEP?

By definition, sleep is sufficient when there is no daytime sleepiness or dysfunction—sleep need is the amount of sleep that guarantees the optimal performance during the next day. Lack of sleep, in turn, leads to negative daytime consequences and impairs performance, functioning and/or well-being one way or another. What the exact consequences of inadequate sleep are may vary between individuals: there seems to be traitlike interindividual variability in the consequences of impaired sleep; different individuals may display different symptom profiles as their reactions to insufficient sleep. For example, some individuals can be more prone to display tiredness and mood alternations, while others can suffer from deteriorated cognitive performance or inattention when exposed to lack of sleep (Van Dongen, Baynard, Maislin, & Dinges, 2004). In addition, there seems to be persistent differences in the tolerance for lack of sleep at least among adults, so that some individuals seem to be more prone to the negative consequences of inadequate sleep than other individuals (Dinges et al., 1997).

Experimental sleep restriction studies are the best way to study the function of sleep—they will give direct information on the cause-effect relationships. Sleep loss has a well-documented effect on mood and cognition among adults. Experimental sleep restriction also impairs perceived psychological well-being and behavior (Banks & Dinges, 2007). Sleep restriction studies among children are limited to those assessing cognitive performance and they suggest that the most complex cognitive tasks are being impaired first; restriction of sleep to four hours a night reduced children's performance particularly in tasks requiring verbal creativity and abstract thinking (Randazzo, Muehlbach, Schweitzer, & Walsh, 1998).

Much of our current knowledge about processes beyond sleeping difficulties in children comes from epidemiology. Increasing number of cross-sectional studies has linked poor sleep quality or short sleep duration with behavioral problems in healthy children. For example, objectively measured short sleep duration was related to with higher level of behavioral symptoms of ADHD in seven- to eight-year-old children (Paavonen et al., 2009). Poor sleep quality is also related to lower cognitive performance and school performance (Paavonen et al., in press). It may also moderate the cognitive consequences among children risk with other risk factors, such as low educational background (Buckhalt, El-Sheikh, & Keller, 2007) or emotional insecurity or marital conflict in the family (El-Sheikh, Buckhalt, Keller, Cummings, & Acebo, 2007).

Interestingly, short sleep duration in early childhood (under two years of age) is related to poorer cognitive performance at six years of age (Touchette et al., 2007). Early sleeping difficulties may therefore indicate risk for later difficulties, but causal relationship is also possible as one study showed that lengthening of sleep duration improved attention and performance in arithmetic tasks (Sadeh, Gruber, & Raviv, 2003). This suggests that many of the participating children suffered from chronic lack of sleep prior to the study.

During the recent years, there has been discussion over the role of sleeping difficulties in the development of psychiatric disorders. Longitudinal studies have shown that poor sleep quality often predicts depression or other neuropsychiatric disorders. For example, high levels of motor activity during sleep and low regularity in infancy, in particular irregularities in sleeping and eating schedules, were predictive of dysthymic disorder or depression/anxiety in adolescence (Ong, Wickramaratne, Tang, & Weissman, 2006). Similarly, 25% of the children with chronic and severe sleep difficulties at the age of 6–12 months were diagnosed with ADHD at the age of 5.5 years (Thunstrom, 2002). Insomnia or poor sleep quality seem to precede depressiveness in adolescence (Roane & Taylor, 2008) and several studies in adults have also linked poor sleep quality with a higher risk for subsequent depression.

While it is possible that this association reflects a common genetic or neurologic vulnerability for both the psychiatric and the sleep disturbance, the findings have also raised the question, whether sleep disturbances might play a direct and independent causative role in the development of certain psychiatric disorders. Current data, however, does not give definitive answers to this hypothesis as intervention studies are still lacking. If successful treatment of insomnia would decrease the incidence of depression over time, impaired sleep would not only represent a nonspecific correlate of the risk but would be an actual mediator the risk and thereby form an independent risk factor for depression. In accordance with this hypothesis, a recent longitudinal study was able to link earlier bedtimes to lower risk for depression, which suggests that adequate sleep duration could indeed be protective of subsequent depression (Gangwisch et al., 2010).

The connection between sleeping difficulties and ADHD also deserves a specific comment. It has been long known that sleep breathing disorders in children often is accompanied by behavioral symptoms. It was then reported that chronic snoring, a typical symptom of sleep breathing disorder, was more common in children with ADHD than in healthy controls, which that raised question whether a part of the behavioral symptoms of ADHD could be caused by a previously undiagnosed sleep breathing disorder.

There is also clear biological basis for the hypothesis, as the consequences of poor sleep appear to be mediated through the prefrontal cortex which has a central role in regulating executive functions, behavior and alertness (Horne, 1993). A PET-based study, for example, showed that 24 hours of sleep deprivation significantly reduced blood flow in the prefrontal cortex (Thomas et al., 2000) and the degree of this reduced activity corresponded with decreases in those performance tasks that required complex cognitive processing (Belenky et al., 2003). Indeed, one theory suggests that ADHD is a chronic state of hypoarousal where the behavioral symptoms are by-products of the compensatory stimulatory activity of the brain (Cabral, 2006). Clinical observations had already long suggested that children might be prone to displaying behavioral symptoms of ADHD when exposed to lack of sleep (Dahl, 1996). Almost a groundswell of new research was provoked by this fundamental study to explore whether the behavioral symptoms of ADHD and inadequate sleep could be connected.

Studies pertaining to inadequate sleep and the behavioral symptoms in normative populations have been sporadic, but both parent-reported and objectively measured short sleep duration have been linked with behavioral problems, externalizing symptoms, and inattention. Experimental studies have shown that sleep restriction tends to increase inattention but other behavioral aspects, such as impulsivity, have not been covered (Fallone, Acebo, Arnedt, Seifer, & Carskadon, 2001; Fallone, Acebo, Seifer, & Carskadon, 2005). Thus our knowledge on the fundamental role of sleep and the control of behavior, attention, and vigilance still remains elusive.

CONCLUSIONS

Wide range of sleeping difficulties can manifest during the entire childhood. Sleeping difficulties are often persistent and in some cases linked to psychiatric problems at late adolescence, and there is an urgent need to develop and implement prevention programs in the health care system. This would require understanding the patterns of correlation and the dynamic networks between risk factors and their manifestations. Even though inadequate sleep seems to have the potential to impair behavior and performance, intervention studies are needed to confirm the causality. If these studies will confirm the cause-effect relationship, lack of sleep may be an important source of behavioral problems among children, because chronic lack of sleep is a prevalent problem in western societies.

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Chapter 9

MENTAL HEALTH OF CHILDREN EVACUATED DURING WORLD WAR II

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LONG-TERM CONSEQUENCES OF EARLY LIFE STRESS

Recent research has produced increasing evidence that early life stress (ELS), an experience of severe stress due, for example, to parental loss, abuse, or neglect during the childhood years, may have profound long-term effects on the individual's physiology, psychology, and immune function (Alastalo et al., 2009; Danese et al., 2009; Danese et al., 2008; Gunnar & Quevedo, 2007). This evidence has confirmed observations from experimental animal models in which ELS, usually defined as temporary maternal separation early in life, has shown to cause changes in gene expression that are manifest, for instance, in the physiology of stress regulation (Holmes et al., 2005; Pryce et al., 2005).

However, compared to animal experiments, in which the nature and duration of ELS can be controlled by the experimenter, the examination of ELS in humans is methodologically challenging. Most typically children experience ELS in the form of abuse and neglect in their family environment, and it may be impossible to disentangle the effects of ELS from their shared genetic makeup with their parents. Second, the experience of ELS may be cumulative such that prenatal adversity, economical strains, learning difficulties, nutritional problems, parental mental health problems, lack of appropriate health care, child abuse, and neglect accumulate in a manner that make it impossible to understand which characteristics of ELS may especially be harmful for later mental health. Finally, the major problem in the examination of ELS on later mental health is that most of the studies are conducted on samples in which participants are asked to report their experience of ELS retrospectively. In these studies there is always the possibility that the recall is biased by the current mental health status, or by other life events that have occurred after the childhood years.

With regard to prospective human evidence, adoption studies provide one methodologically sound alternative to study the effects of ELS. Not surprisingly, internationally adopted children have shown to be at risk for the development of mental health problems. A Swedish large register study extending up to adulthood reported a three- to fourfold risk for mental health disorder leading to hospitalization (Hjern, Lindblad, & Vinnerljung, 2002), a fourfold risk of suicide (von Borczyskowski, Hjern, Lindblad, & Vinnerljung, 2006), and a fivefold risk for substance abuse among adopted children (Hjern, Lindblad, & Vinnerljung, 2002) when compared to nonadopted peers. The problem in the adoption studies, however, is that very rarely there has been any information on the conditions prior to adoption, leaving then considerable variance in the experience of ELS in different countries and during different historical circumstances. It is also unclear whether the nonadopted peers in the new homeland are the right comparison group for the adopted children, the results may be opposite if we compared them to their peers in their initial homeland, or to peers that remained in the institution. This is exactly what was done in the only randomized experiment among adopted children that was conducted in Romania. In that study, institutionalized children were randomly allocated either to foster care or to institutional care as usual. The results show family placement was an effective intervention which protected children from cognitive deficits (Nelson et al., 2007) and mental health problems (Zeanah et al., 2009) in their early development.

NATURAL EXPERIMENTS IN THE STUDY OF ELS

Another prominent way to study the effects of ELS on later mental health is to profit from the opportunities provided by experiments of nature. These happen, when unfortunate circumstances cause ELS randomly to some children, whereas their fellow peers remain intact. We are aware of three such natural experiments, which have examined the effects of ELS on later mental health with relatively long follow-up periods. The first is a study that examined the mental health of individuals placed immediately after birth into a Christmas Seal Home for an average period of seven months to avoid any contact with a mother with tuberculosis or any other family member. This prevention program against morbidity and mortality for tuberculosis in children was done with maternal consent and became an accepted public health policy, applying all social groups in Finland during the 1930s. In this register study, heightened risks for depression (Veijola et al., 2004), substance abuse (Veijola et al., 2008), and criminal behavior (Mäki et al., 2003a) have been reported among the formerly institutionalized newborns. Noteworthy is that the risk for schizophrenia or the risk for psychoses was not increased (Mäki et al., 2003b).

The second line of natural experiments has followed the life of Holocaust survivors, although very rare, these studies have focused on the survivors that were children during the war. One such study showed that child survivors had higher PTSD symptom scores, higher depression, anxiety, somatization, and anger-hostility scores and lower quality of life (Amir & Lev-Wiesel, 2001, 2003). Another study reported higher prevalence rates of anxiety disorders, sleep disturbances, and emotional distress among a sample consisting mainly of child and adolescent survivors, the findings being independent of age during the Holocaust (Sharon, Levav, Brodsky, Shemesh, & Kohn, 2009).

The third line of experimental research on ELS, which we have followed, is the examination the life course of children, who were evacuated from Finland during World War II to live with foster families in safer environments. Prior to development of Bowlby's attachment theory, in the late 1930s and early 1940s, there was not much theoretical understanding of the role of early attachment for later development. Yet, already in 1939, Bowlby, Miller, and Winnicott (1939) wrote a warning letter to the British Medical Journal noting the psychological cost that maternal separations could create:

> From among much research done on this subject a recent investigation carried out by one of us at the London Child Guidance Clinic may be quoted. It showed that one important external factor in the causation of persistent delinquency is a small child's prolonged separation from his mother. Over half of a statistically valid series of cases investigated had suffered periods of separation from their others and familiar environment lasting six months or more during their first five years of life. Study of individual case histories confirmed the statistical inference that the separation was the outstanding etiological factor in these cases. Apart from such a gross abnormality as chronic delinquency, mild behavior disorders, anxiety, and a tendency to vague physical illness can often be traced to such disturbances of the little child's environment, and most mothers of small children recognize this by being unwilling to leave their little children for more than very short

> periods. . . . But the point that we wish to make is that such an experience in the case of a little child can mean far more than the actual experience of sadness. It can in fact amount to an emotional " black-out," and can easily lead to a severe disturbance of the development of the personality which may persist throughout life. (Orphans and children without homes start off as tragedies, and we are not dealing with the problems of their evacuation in this letter.) If these opinions are correct it follows that evacuation of small children without their mothers can lead to very serious and widespread psychological disorder. . . . A great deal more can be said about this problem on the basis of known facts. By this letter we only wish to draw the attention of those who are in authority to the existence of the problem. (pp. 1202–1203)

Despite this effort to draw the attention of policy makers, large-scale evacuations were organized in the United Kingdom and Finland. This created then an exceptional opportunity for contemporary psychology to study long-term lifespan outcomes related to parent–child separation in a natural setting, involving children from varying socioeconomic backgrounds. With regard to previous research, we are aware of only four studies in the United Kingdom, all based on the evacuation of children living in London during World War II, that have examined the long-term mental health outcomes of separation from both parents. The results are contradictory; one study found that former evacuees were more likely to have insecure attachment styles and lower levels of current psychological well-being than controls at the age of 67 years (Foster, Davies, & Steele, 2003). Two other studies, however, found no differences in adult mental health, depression and anxiety states between the former evacuees and the controls (Birtchnell & Kennard, 1984; Tennant, Hurry, & Bebbington, 1982). A more recent study (Rusby & Tasker, 2009), on the contrary, found that the former evacuees were in greater risk for depression and clinical anxiety. However, based on these studies, the evidence on the long-term consequences of parental separation is rather tenuous because of the small sample sizes, participant recruitment through advertisement and word of mouth, ambiguity related to the age when the outcomes were measured, paternal death in the control group, and data being partly restricted to women (Birtchnell & Kennard, 1984; Foster et al., 2003; Rusby & Tasker, 2009; Tennant et al., 1982).

Consequently, more research is needed to shed light on the life span consequences of ELS in humans. In the present chapter, we review our findings regarding the Finnish experience of evacuations in World War II. After providing background information on the study we review our empirical studies on war evacuees, followed by a general discussion.

CHILD EVACUATIONS IN THE HELSINKI BIRTH COHORT STUDY

During World War II, Finland fought two wars with the Soviet Union: the Winter War from November 1939 until March 1940 and the Continuation War from June 1941 until September 1944. To protect Finnish children from the effects of these wars, children from various socioeconomic backgrounds were evacuated abroad, primarily to Sweden and Denmark, unaccompanied by their parents. War strains were diverse and changed during the 1939–1940 war, and again in 1944, when the country experienced frequent air raids. There was also the threat of occupation by the enemy, which, however, never materialized. In 1942 food shortages were common, but there was also widespread expectation that the war would end soon. Since the evacuations were voluntary, the likelihood of a Finnish child being evacuated was influenced by an unpredictable interplay between political and familial factors (Kavén, 1985; Pesonen et al., 2007b). It is also of note that siblings were usually placed in different foster families to promote faster learning of the new language.

The evacuations had strong political support. Public criticism of the evacuations was discouraged by the government, and the media was used effectively to advocate the evacuations. Ultimately, the evacuations were seen as a positive opportunity in many families, particularly in 1942, when food shortages were severe and the war was expected to end soon (Kavén, 1985; Lomu, 1974). However, the war continued, and altogether approximately 70,000 children were sent into foster care unaccompanied by their parents for an average of almost two years (Kavén, 1985; Lomu, 1974; Pesonen et al., 2007a, 2007b). The Finnish National Archives preserve full documentation of the 48,628 children evacuated abroad by the Finnish government, the remaining 20,000 evacuations being organized by parents themselves.

The Helsinki Birth Cohort Study (HBCS) comprises 13,345 women ($n = 6,370$) and men ($n = 6,975$) who were born as singletons in one of the two main maternity hospitals in Helsinki, Finland, between 1934–1944, and who were living in Finland in 1971 when a unique personal identification number was allocated to each member of the Finnish population (Barker, Osmond, Forsén, Kajantie, & Eriksson, 2005). From the documents retrieved from the Finnish National Archives' register, we identified 1,781 (13.4% of the HBCS; $n = 822$, 46.2% women) participants who were separated temporarily from their parents as children. The register gives full documentation of all the children evacuated without their biological parents to temporary foster care abroad, mainly in Sweden and

Denmark, through the Ministry of Social Affairs and Health between 1939 and 1946. The age at the time of separation (*M* = 4.7 years, *SD* = 2.4 years) and the duration of the separation (*M* = 1.7 years, *SD* = 1.0 years) were also identified from the register. In the study of ELS on subsequent life, we have thus profited from this register-based information on ELS, which allowed a very accurate examination of the effects of duration and timing of ELS on later well-being.

Given that many of the evacuations were not registered, our first studies on evacuations (Pesonen et al., 2007a, 2008) were conducted in a subsample of the HBCS, of whom we had questionnaire-based information on parental separations in addition to the information derived from the register. From the questionnaire, we were able to identify additional individuals separated from both their parents during the war who were not registered in the Finnish National Archives. In later studies, however, we rely exclusively on the register data. However, we excluded from the analyses the few cases (*n* = 189) reported to be separated in the questionnaire but not registered in the Finnish National Archives.

FINDINGS ON DEPRESSIVE SYMPTOMS

One of our first studies was conducted in a subsample of the HBCS. This subsample was randomly selected from the initial cohort. They underwent detailed clinical examination on cardiometabolic and hormonal characteristics and filled in a survey including depressive symptoms in 2001–2003 and 2004. Thus, our first study on the separated children was based on 1,658 participants of the HBCS, who had filled in the Beck Depression Inventory twice, an average two years apart (Pesonen et al., 2007a). We found that those who had been separated as children unaccompanied by either parent to temporary foster care reported, at the average age of approximately 60 years, 20% more severe depressive symptoms than did those who did not experience any parental separation in times of war. Furthermore, they were almost twice as likely to remain at least mild in severity in depressive symptoms over two consecutive measurement occasions in late adulthood. Moreover, separation that lasted more than three years had the largest effect, being associated with over 33% more severe depressive symptoms, with an odds ratio of 4.4 for belonging to the group who reported depressive symptoms remaining at least mild in severity over time. Finally, those who had been separated either in infancy or at school age reported over 23% and 30% more severe depressive symptoms in late adulthood, whereas those separated in toddlerhood (aged from two to four years) or in early childhood (aged from four to six years) seemed to be the least affected.

With regard to the contradictory data derived from the British experience of evacuations, we argued that our results may be more reliable. Unlike the British studies, our study was based on an epidemiologic cohort and data on separations were mainly based on register information. In addition, we were able to test our hypotheses in larger samples, and with a well-validated measure of depression. However, our study had also limitations that are in common with our other studies on this subject. First, although children were evacuated from all socioeconomic backgrounds, it was more likely that children in the lowest category of socioeconomic status (SES) became separated. Although we controlled for childhood and adulthood SES in all our analyses, its role should not be overlooked. For instance, there is always the possibility that the decision to evacuate the child was dependent on family adversity other than that related to measurable SES, such adversity acting as a potential confounder. Secondly, we do not have information on the quality of foster care, which, of course, could have modified the stress experience of the children (Rusby & Tasker, 2009).

FINDINGS ON PSYCHIATRIC MORBIDITY AND MORTALITY

We have preliminary data on the mental health of the former evacuees from the entire birth cohort with available data, involving 12,747 participants (96% of the initial cohort), of whom 1,719 had been separated according to the register information (Räikkönen et al., 2010). This study examined the cumulative incidence of psychiatric disorders from early to late adulthood severe enough to require hospital treatment or cause death in the separated and the nonseparated. Diagnoses on psychiatric disorders from early to late adulthood and severe enough to require hospital treatment were identified from the Finnish Hospital Discharge Register (HDR), and severe enough to cause death from the Finnish Causes of Death Register (CDR).

The first findings indicate that compared to the nonseparated, the separated showed a higher cumulative incidence of any psychiatric disorders, and of substance use and personality disorder. We also found that individuals with an upper childhood socioeconomic background were particularly sensitive to the temporary separations and showed the highest cumulative incidence psychiatric disorders. The associations were not specific to age at or length of the temporal separations, and were not confounded by factors that were associated with a higher likelihood of being temporarily separated from the parents and/or that may pose a risk for later psychiatric disorders.

The findings linking temporary separation from the parents specifically with substance use and personality disorders, but not with psychoses are, thus, in agreement with the previous findings (Johnson, Cohen, Brown, Smailes, & Bernstein, 1999; Mäki et al., 2003a; Veijola et al., 2008; Widom, Czaja, & Paris, 2009; Widom, DuMont, & Czaja, 2007; Widom, Ireland, & Glynn, 1995), but our null findings with mood and anxiety disorders were discordant with past reports (Danese et al., 2009; Mäkikyrö et al., 1998; Veijola et al., 2008; Widom et al., 2007). Yet, we previously reported that the temporary separations from the parents were associated with depressive symptoms in a subsample of the current study (Pesonen et al., 2007a).

FINDINGS ON STRESS REACTIVITY

Animal models have demonstrated that consequences of ELS may lead to physiological changes in the central nervous system that may be permanent. Among the plausible physiological mechanisms behind the associations is of ELS and later psychiatric morbidity is stress-related hypothalamic-pituitary-adrenal (HPA) axis functioning that shows associations with a number of psychiatric disorders (Claes, 2004). Animals who have experienced ELS show increased corticotrophin-releasing hormone expression and decreased numbers of glucocorticoid receptors in the hippocampus, hypothalamus, and frontal cortex (Ladd, Owens, & Nemeroff, 1996) and methylation of hippocampal glucocorticoid receptor genes (Weaver et al., 2001), all reflecting altered neural plasticity at multiple levels of the central nervous system. At a behavioral level, lower levels of glucocorticoid receptors have been associated with poorer stress regulation capacity and more prolonged stress reactions (Weaver et al., 2004). Consequently, early separated animals exhibit greater startle responses, greater freezing and anxiety responses, and two- to threefold greater hormonal responses to stress as adults (Cirulli, Berry, & Alleva, 2003).

We had the opportunity to study the hormonal stress reactivity of a subsample of the HBCS (n = 282), using the Trier Social Stress Test (TSST) (Pesonen et al., 2010). The TSST is a psychosocial stress test in which the subject is asked to give a speech and do a series of subtractions in front of the committee. This committee minimized all verbal and nonverbal communication with the subject in order to add stressfulness to the performance. This is a well-validated procedure that is known to elicit a powerful hormonal stress response (Kudielka, Buske-Kirschbaum, Hellhammer, & Kirschbaum, 2004; Kudielka, Schommer, Hellhammer, & Kirschbaum, 2004), measured via cortisol in saliva and in plasma, and from plasma ACTH.

We found that ELS was associated with altered responsiveness of the HPA axis more than 60 years after childhood separation (Pesonen et al., 2010). In comparison to nonseparated individuals, individuals separated from both parents at a mean of three years of age displayed 20%–25% higher salivary cortisol and plasma ACTH levels across the time points during the TSST, and higher salivary cortisol reactivity in response to the TSST, more than 60 years later.

Importantly, altered stress reactivity can be due to current depressive symptoms, and not to initial trauma. Therefore, we controlled for the current depressive symptoms in our analyses, and found that the association between a childhood traumatic event and HPA axis function is not explained by the presence of symptoms of depression (Pesonen et al., 2010). This suggests that the interrelations between ELS, stress physiology, and mental health are not merely due to symptoms of depression. Rather, our findings may suggest that ELS may have "programmed" the function of the HPA axis: as the brain continues to develop after birth, brain development during childhood may be especially vulnerable a period for the effects of glucocorticoids. Perhaps ELS is one factor underlying the consistently documented association between altered HPA axis functioning and depression. Our observations accorded with previous studies showing that the association between ELS and HPA axis responsiveness are stronger among men than women (Tyrka, Wyche, Kelly, Price, & Carpenter, 2009). In addition, we observed an inverse U-shaped relationship between age at separation and both salivary or plasma cortisol and plasma ACTH reactivity. The highest concentrations were observed in the middle of the age range among the children separated from both parents, that is, among those separated as toddlers and in early childhood. Comparison of this observation to earlier observations is difficult, since the specific age period of ELS due to abusive experiences can rarely be identified retrospectively. Studies of parental loss or divorce, on the other hand, have not been able to specify age periods with such accuracy (Bloch, Peleg, Koren, Aner, & Klein, 2007; Luecken & Appelhans, 2006; Tyrka et al., 2009). It might have been that the children in the middle of the age range might have perceived the social and cultural upheavals of separation (foreign language and customs, new peers) as more difficult to cope with owing to their undeveloped self-regulative capacities, and this uncontrollability is associated with higher HPA axis responses later on. Significantly, the duration of separation did not have an independent effect on hormonal reactivity.

FINDINGS ON COGNITIVE ABILITY

Importantly, the neural circuitry of stress involves several brain structures, including the hippocampus, amygdala, and prefrontal cortex, all of which are vital to cognitive function. Indeed, animal research has suggested that ELS may also accelerate late-onset progressive impairment of the hippocampus and cognitive function (Brunson et al., 2005; Rice, Sandman, Lenjavi, & Baram, 2008). The human evidence, however, is scarce. It shows that institutionalized children, in comparison to their siblings or peers who were adopted from these institutions, obtained lower scores on tests of intellectual ability at an average age of 54 months (Nelson et al., 2007). When compared to peers in their new homeland, intercountry adoptees scored lower on tests of intellectual ability in young adulthood (Nelson et al., 2007; Odenstad et al., 2008; van Ijzendoorn, Juffer, & Poelhuis, 2005). Further, a recent study demonstrated that elderly Holocaust survivors had a greater age-related decline in explicit memory compared to their nonexposed peers (Yehuda et al., 2006). These studies can, however, rarely distinguish other factors accompanied by early stress, such as impaired nutrition.

Our preliminary results provide further prospective evidence on the long-term intellectual outcomes of ELS among 2,725 men of HBCS (Pesonen et al., submitted manuscript). Data on verbal, arithmetic, and visuospatial intellectual abilities of the young adults of the HBCS was retrieved from the archives of the Finnish Defence Forces: since the 1950s, every Finnish man has undergone this test in conjunction with his compulsory military service. This obligatory test is given to all new recruits during the first two weeks of their military service and is used when the conscripts are selected for leadership training. The test battery is designed to measure general ability and logical thinking, is composed of verbal, visuospatial, and arithmetic reasoning subtests. Each subtest is timed and consists of 40 multiple-choice questions that are ordered by difficulty. Correct answers are summed to yield a test score.

We found that the separated had –0.28 SD to –0.13 units lower verbal, visuospatial, and arithmetic ability scores, as compared to nonseparated individuals (Pesonen et al., submitted manuscript). Consistent to previous retrospective and scant prospective evidence, we found the strongest relationship between ELS and lower scores on verbal reasoning (Bremner, 2006; Saigh, Yasik, Oberfield, Halamandaris, & Bremner, 2006; Yasik, Saigh, Oberfield, & Halamandaris, 2007). The associations were not confounded by childhood social class, birth order, birth weight or by age or height at time of intellectual assessment, factors that previous research has found as predictors of intellectual development.

In addition we observed a threshold effect between duration of stress exposure and impairment of intellectual ability, such that a separation lasting for one year or less was not associated with worse intellectual performance. Second, we were able to specify an age period when the child is probably most vulnerable to ELS. The most widely affected children were aged from two to four years, and from four to seven years when first separated, whereas separation in infancy or at school age had fewer effects on the test scores, except for the verbal ability score. Our finding corresponds to our previous observation that the highest HPA axis reactivity to stress in adults occurs within this same group of separation age (Pesonen et al., 2010).

These findings showing that infancy may be a period of lesser vulnerability parallels findings showing that adoption during infancy may buffer the potentially adverse developmental consequences of institutionalization (Gunnar & van Dulmen, 2007; Nelson et al., 2007). However, the analogy may be misleading. Whereas earlier adoption is likely to reduce the potential time of social deprivation, we do not know whether the separated children were actually deprived in their foster families.

FINDINGS ON LIFE HISTORY

Targeting solely on mental health outcomes, stress reactivity, or cognitive ability, may not effectively describe the long-term consequences of ELS. Therefore, we also examined whether the separations were associated with reproductive and marital traits among a subsample of 1,704 former evacuees (Pesonen et al., 2008). According to the life history theory and its variations (Belsky, 2008; Charnov, 1993), a risky and uncertain environment during childhood may lead to reproducing early in life in order to maximize the probability of leaving descents. Among humans, this theory is supported by fairly rich retrospective evidence associating general childhood family adversities, or the father's absence, with an earlier onset of menarche (Ellis, 2005). Among the few existing prospective studies, a recent large-scale one showed that children who were adopted in Denmark had a 10–20 times greater risk for developing a precocious puberty compared to inhabitants of Danish origin (Teilmann, Pedersen, Skakkebaek, & Jensen, 2006). While most of the existing evidence points to earlier rather than later pubertal development, there are data from the former Yugoslavia (Prebeg & Bralic, 2000), suggesting delayed pubertal development in times of the war, at least in girls exposed to stressful conditions during or shortly before their menarcheal age. Our aim was to test whether a separation in childhood was associated with reproductive traits later in life, measured by age at onset of menarche. We also explored the associations between a separation and age at first childbirth, number of children by late adulthood and their interbirth intervals, all issues which have not been prospectively tested against a childhood psychosocial trauma in an epidemiological cohort (Pesonen et al., 2008).

In accordance with earlier studies, we found that the separated women had an earlier onset of menarche than nonseparated women, independent of the year of birth, mothers' age at menarche, childhood SES, and Body Mass Index at age seven (Pesonen et al., 2008). Compared to the nonseparated girls, the separated girls were 2.1 times more likely to have their menarche before or at the age of 12 than after the age of 13. An adjustment for general parental quality during, measured by a retrospective report childhood did not affect the results, further emphasizing the role of separation in explaining the results. We also found that the separated women had given birth to more children than the nonseparated women. Compared to the nonseparated women, the separated women were 2.3 times more likely to have four or more children, and 1.9 times more likely to have three children than to have a single child. The findings concerned also men: the separated men had their first child at a younger age than the nonseparated men, and the interbirth intervals were shorter. Based on these observations, we hypothesized that a traumatic experience may lead to a need to start a family at an earlier age in order to overcome the instability derived from the trauma. Even though the effects were relatively weak, they were theoretically based and delineated a consistent tendency to maximize early reproduction in uncertain times, such as following childhood psychosocial trauma. In agreement with recent theorizing (Belsky, 2008), instead of emphasizing nonoptimal, development disruptions, the results clearly challenge to put more emphasis on considering the adaptive life solutions following the trauma-related coping processes.

Finally, we also tested whether the ELS had consequences on marital history of the evacuees. Contrary to general expectations, we found that separation associated with smaller likelihood to divorce later in life, both in men and women. We do not know, however, whether this finding reflected heightened marital satisfaction, or whether it reflected increased attachment anxiety, an excessive concern about abandonment, which may function as a maintaining force for proximity even in unhappy marriages (Davila & Bradbury, 2001).

GENERAL COMMENTS

As recently summarized (Gunnar & Fisher, 2006), the major challenges in human studies on ELS are to get as close as possible to experimental conditions and to obtain more information on the timing of trauma. Our study in the HBSC unique natural experimental setting, of which approximately 13% were exposed to a specific form of ELS, parental separation, has allowed us to overcome some of the challenges relating to human studies on ELS. These kinds of exceptional conditions are particularly significant to natural experimental designs because potential confounders are assumed to be randomly distributed across the groups under investigation. Thus, we have argued that the likelihood of a Finnish child being evacuated was at some extent random, influenced by an unpredictable interplay between political and intrafamilial factors, such as the parents generally choosing to send only one or some children away. In 1942, when the first massive wave of evacuations took place, the war was also expected to end quickly. Even child mental health professionals in Finland advocated the evacuations, creating the sense that this was an opportunity for children, as Finnish child psychiatrist T. Brander pertinently remarked in 1943 (Brander, 1943):

> Not a single case has come to my attention in which a child suffered psychological injury from this voluntary evacuation. Quite the contrary: such a stay proved to be an instructive and refreshing experience, from which the children returned with heightened vitality. This was due to the excellent care and attention bestowed on our children by our western neighbors. (p. 314)

However, several methodological considerations should be taken account when interpreting the findings. In the studies among subsamples of the HBCS, investigating the associations between depressive symptoms and stress reactivity, we found the differences in the socioeconomic background of the separated and nonseparated were not statistically significant. However, in studies involving more subjects, we observed a statistically significant difference in childhood SES: the separated originated more frequently from lower socioeconomic background. Although we have adjusted for childhood SES in all our studies, the role of childhood SES on later outcomes may have been more complex, thus acting as a potential confounder in our studies. On the other hand, when we examined the role of ELS in later psychiatric morbidity and mortality, it was especially those participants who originated from upper socioeconomic position that were in increased risk for later psychiatric disorders, whereas the temporary separations did not add to the risk otherwise associated with a lower childhood socioeconomic background. In this sense, preponderance of separation in the lowest category of childhood SES may have even masked the effects of ELS in our studies. In addition, our findings suggested that an upper childhood socioeconomic background may not buffer from severe ELS, such as that arising from temporary separations from parents.

Another challenge in the longitudinal studies is the sampling bias. Those who responded to the depression questionnaire may have been healthier than those who did not, and those who attended the stressful stress test may have been more adventurous and less depressed than those who refused. This kind of sampling bias concerned only these two studies based on voluntary participation. A second source of sampling bias is related to the migration processes and childhood mortality, thus concerning all our studies. Approximately 11% of the separated were adopted in Sweden as child. However, a previous study (Räsänen, 1992) found no significant differences in mental health status between the adopted and returned former child evacuees. In addition to adoptions, the migration processes between Sweden and Finland have been relatively complex, some adopted children moving back to Finland as they grew up, and some former evacuees moving back to Sweden as young adults. Noteworthy, the emigration in adulthood was more likely for former child evacuees than for the nonseparated in the HBCS (Räikkönen et al., submitted manuscript). The mortality of evacuated children was 0.6% over the whole evacuation period (mean: 2.1 years), slightly lower than the annual mortality among Finnish children aged one to nine years, which ranged from 0.4% to 0.5% during 1941–1945 (Pesonen et al., 2007a). We also acknowledge that the parents may have generally chosen the weakest children, causing potential bias. However, the original governmental policy aimed at excluding unhealthy children. Later in the war, sick children (11% of registered evacuations, 3.5% mortality) were also considered eligible for evacuation (Pesonen et al., 2007a).

Finally, we are aware that evacuated children may have experienced other adversities during their foreign stay, making it difficult to isolate the effect of separation from other influences. However, we definitely know that the children lost their secure base with the unpredictable evacuation and, thus, also lost the parental assistance needed in regulating emotions, especially under serious stress. As a subjective case report describes (Serenius, 1995), the separation trauma evoked both dissociative memory function and uncontrollable anxiety, which characterized individual emotion regulation even 50 years after evacuation.

In conclusion, our study presents evidence of long-term mental health disadvantage and cognitive impairment following experience of ELS.

Although the historical circumstances in this study were particular, the developmental significance of ELS is not bound to this study. According to data reported by the United Nations Refugee Agency (UNHCR) in 2008, there were 42 million displaced individuals worldwide, including 15.2 refugees, of which 44% are children (http://www.unhcr.org/4a375c426.html). Even without displacement, an experience of ELS for various reasons, parental loss or family disruption, child abuse and neglect, traumatizing events, illness, poverty, institutionalization, or war concerns children everywhere in the contemporary world.

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Chapter 10

CHILDREN SEEKING ASYLUM: THE PSYCHOLOGICAL AND DEVELOPMENTAL IMPACT OF THE REFUGEE EXPERIENCE

Louise Newman

At the end of 2008 the United Nations High Commissioner for Refugees (UNHCR) estimated that there were 10 million refugees around the world and over 14 million internally displaced persons. Many more were deemed stateless (over 6 million), with a total of 34 million “of concern” to the agency. Around one-third of these persons were children aged 6–17 years, and around 10% were less than five years of age. Infants and children constitute a significant proportion of those impacted by war, conflict, displacement and loss and are among the most vulnerable.

The developed world maintains a clear approach aimed at regulating and limiting the influx of asylum seekers and there remains community concern about the impact of new arrivals on employment, standard of life and cultural values. The term *multiculturalism* has become highly charged for some nations and also highly politicized. Pressure increased during the 1990s with increasing numbers of displaced persons seeking asylum in response to war and mass violations of human rights (UNHCR, 2000). Many had experienced torture, sexual assault and other trauma and presented with a range of health and mental health issues. Children have been both witness to and direct victims of atrocity (Murthy & Lakshminarayana, 2006).

In spite of the overwhelming needs of asylum seeking people the majority of industrialized countries have no formal resettlement programs with the result that millions of people seek asylum directly with some entering countries in an “unauthorized” fashion (around 5 million from 1995 to

2001). Humanitarian protection programs are limited with many refugees spending protracted periods in refugee camps and being further exposed to deprivation and trauma. The main response of many rich nations has been to develop so-called policies of "deterrence," including increasing border protection measures and limiting rights to appeal (Silove, Steel, & Walters, 2000). In some countries, particularly Australia, asylum seekers have had limited access to health care, education and work rights. These restrictive measures directly impact the welfare, development, and health of infants and children and have been particularly controversial.

Perhaps the most controversial measure introduced in some countries has been the detention of asylum seekers, including women, infants and children. The United States, United Kingdom, Germany, Italy, and Australia have all detained significant numbers of children as routine practice despite concerns about the nature of detention environments and difficulties providing child support, activities, and education. The practice of detaining children, including unaccompanied minors as well as those with family groups, seems to be in conflict with the statements of the UNHCR that detention of children should only be used as a measure of last resort and for short periods of time. The housing of family groups in immigration detention facilities creates specific management difficulties and raises issues as to how best to protect the human rights of children in this situation. In the United States more than 5,000 children are held in immigration detention on an annual basis and in 2006 a 512-bed facility purpose built for the detention of families was opened in Texas. The British government has formally submitted a reservation to the UNHCR seeking to enable children subject to immigration control to be excluded from human rights provisions (Newman & Steel, 2008). Australia was the first developed nation to develop a policy of mandatory detention for all "unauthorized" arrivals and allowed this for an indefinite period time (Silove, Austin, & Steel, 2007). Detention of children has highlighted what may be seen as a fundamental tension between the priorities of immigration law and the rights of children to care and protection.

Although voluntary signatories to the United Nations Convention on the Rights of the Child, it is arguable that several countries stand in breach of this and related conventions in an ongoing way. In Australia, for example, the use of a remote facility for processing of asylum seekers on Christmas Island, in effect detains all child asylum seekers and does not allow for community detention placements of families with infants and children (Newman, 2009). In the midst of debates about the appropriate response to asylum seekers, infants and children have become caught in a system that is unable to provide adequate protection or support for those who have already experienced significant trauma. The following discussion will review the psychological and developmental impact of immigration detention on child asylum seekers, with reference to the Australian experience and research findings.

SEEKING ASYLUM, DETENTION, AND MENTAL HEALTH

Between 1999 and 2005 around 3,000 children were held in immigration detention facilities in Australia. The average length of stay in 2003 was around 20 months. Significant numbers of unaccompanied minors, mainly adolescent boys, were also detained. Detention facilities were in remote regions with little provision for the health and mental health needs of detainees, and in particular, limited facilities for children and inadequate play and educational services—in effect, a neglectful environment. In addition to environmental and emotional deprivation, children were also impacted by the experiences of their parents/caregivers, many of whom developed significant depression. The dilemma for many asylum-seeking parents is that many have fled their country of origin motivated to protect their children, only to find themselves in a detention environment. The capacity of parents to manage their own trauma and distress is of primary importance on mediating the effects of traumatizing or depriving environments on infants and young children. The traumatized parent may find it difficult to provide a "buffer" or protective function for their child if they are overwhelmed by their own experiences.

For many parents in immigration detention experiences of depression and guilt are common. Rates of depression, anxiety, trauma-related and physical symptoms increase with the length of time spent in detention (Green & Eagar, 2010). Witnessing the deterioration of a parent's mental functioning may have particularly negative impact on children as described in observational studies to have high rates of regressed behaviors, anxiety and attachment difficulties (Mares, Newman, & Dudley, 2002). Over 80% of adult detainees have been found to meet diagnostic criteria for depression and related mental disorders (Steel et al., 2004) suggesting that the impact on their children will be major. Mares and Jureidini (2004) report on a diagnostic survey of asylum seeker children in Australia and found that all 10 children aged 5 to 7 years had cognitive delay and that all children aged 7–17 years met diagnostic criteria for posttraumatic stress disorder and major depression with suicidal ideation. Significantly all these children had experienced further trauma while in the detention environment and were witness to riots, behavioral disturbance, and self-harm.

VULNERABILITY, RISK, AND PROTECTION

Child asylum seekers are particularly vulnerable to the impact of trauma. The outcome for these children reflects the impact of premigration trauma, the detention experience and the response of adult caregivers. Parenting and child protection are fundamentally compromised in traumatic environments (Newman & Steel, 2008).

Two particularly vulnerable groups of child asylum seekers are those born in detention and those unaccompanied minors seeking asylum having arrived alone. Infants have clear neurodevelopmental vulnerability and sensitivity to disruption of caretaking relationships and emotional interaction. Reports of pregnant asylum seekers in the United Kingdom describe women with anxiety during their pregnancy, later concerns about infant development and lack of confidence in themselves as parents. Women described feelings of guilt and shame at having an infant in detention and were concerned that their infant would be psychologically damaged (Mcleish, Cutler, & Stamer, 2002).

Unaccompanied children and adolescents experience not only the trauma of forced migration but the the burden of responsibility for the continuity and survival of their family and culture. In addition they are separated from parents or adult caregivers and significant numbers are orphaned. These children may have been directly targeted in their home countries and involved in war conflict and forced labor. The risks for unprotected child asylum seekers in terms of sexual exploitation and trafficking are significant. Identification of unaccompanied and separate children remains problematic and children may not have appropriate explanations or legal support in the process of seeking asylum (Bhabha, Crock, & Finch, 2006). Failure to recognize child-specific persecution (such as sexual abuse and forced marriage and female genital mutilation), results in underresponse to trauma and increases the risks of ongoing psychological disorder. A major issue within detention settings is the lack of child specialist mental health expertise and limited capacity to recognize signs of trauma or distress in children.

Extreme stress in child asylum seekers has been described as contributing to a severe withdrawal resulting in children feeling utterly helpless in their situation, frequently with overwhelmed parents (Bodegard, 2005). These children present with withdrawal, mutism and refusal to eat or drink requiring hospitalization. A highly publicized case in Australia raised significant concerns about the need to protect children even in the face of the impact of immigration law.

The case of S.B., an Iranian child held in detention with his family, initially in Woomera and then Villawood detention center in metropolitan Sydney, received extensive publicity and put the issue of child detention on the public agenda (Moorehead, 2006). S.B., aged five years, spent a period of 11 months in the Woomera detention facility in a remote Australian desert and was exposed to riots, self-harm, suicidal behavior, and violence. He became progressively more withdrawn and anxious, had nightmares, and started bedwetting. The family was transferred to Villawood detention center in Sydney, where the child was again exposed to behavioral disturbance and self-harm. He witnessed a significant suicide attempt and became progressively more withdrawn and mute. His condition deteriorated to the point that he refused to eat or drink, and he was admitted to the hospital on several occasions for dehydration. He showed some improvement each time he was admitted to the hospital but relapsed each time he was returned to detention. Several child psychiatrists and other professionals advised that S.B. should not be returned to detention and urged that he be released into the community along with his mother. This advice was neglected by the then Minister for Immigration, who argued that to do so would set a precedent for the release of other children. S.B.'s condition continued to deteriorate, and after six months in Villawood he was removed from his family, again against professional advice, and placed in a community foster care. His mother was released four months later, and his father eight months after that, when he was found to be a genuine refugee and granted a residency visa. At 12 years of age, S.B. remained under psychiatric care and had ongoing features of posttraumatic stress disorder, depression, and adjustment difficulties.

PROTECTING CHILD ASYLUM SEEKERS

Several United Nations committees and international nongovernment organizations have reported on the negative impact of immigration detention and particularly the mental health and developmental consequences. All reports have found that the prolonged detention of vulnerable groups is damaging to mental health and is directly related to the high prevalence of mental disorders found in these groups (see HREOC report). Community concern and advocacy on behalf of child asylum seekers in Australia, and increasing concerns about mental health issues in detention centers, gave impetus to some reforms in detention operations and a stated policy of avoiding the detention of children and families. In practice, the policy of off-shore (Christmas Island) housing of asylum seekers has negated this positive initiative.

The need to protect children and prevent mental health problems has created a complex situation where advocacy is a central component of the clinician's role and this may bring clinicians into conflict with government policy (Newman, Dudley, & Steel, 2008). In Australia there has been a discussion about the primacy of immigration law over child protection concerns and an ongoing need to advocate for the removal of children and their attachment figures from remote facilities. For clinicians significant ethical dilemmas present themselves—to work within or outside detention centers; how to treat when the environment and operations of detention are contributing in a major way to the disorders; and whether to engage in a highly politicized arena. Many child mental health clinicians are familiar with the need to advocate for children and their services, but not many have needed to learn the skills necessary to engage in a political process. Detained asylum seekers will inevitably experience some level of distress related to their situation and will deteriorate in situations of prolonged detention. Psychiatrists and mental health professionals have limited capacity to treat in this situation, but arguably have a greater role in raising concerns and awareness about a situation where human rights are violated (Dudley & Gale, 2002).

CONCLUSIONS: TRAUMA AND RECOVERY

Trauma on a massive scale, such as that experienced by many asylum seekers, raises challenges for traditional (Western) psychological models of adaptation and recovery. The term *trauma* in psychological theory usually describes individual internal responses. For asylum seekers trauma has been a collective experience and it often has a long history. Trauma of this type may involve multiple issues and threats to culture and meaning (Miller & Rasco, 2004). Responding to the individual's distress remains important but the cultural, political and historical meaning provide the context. In these situations, the survival of the child asylum seeker comes to symbolize the future continuity of the community and culture. The risks asylum seekers take to provide a future for their children are considerable.

Recovery from trauma and humanitarian crisis as described by Silove and Steel (1999), involves an involved process of reestablishing safety, security, and relationships. For children provision of and connection with attachment figures and consistent care is central to processing of trauma. Supporting parents in regaining a sense of parenting competence will also be important.

In the longer term, child asylum seekers need support to piece together a narrative account of their history of flight and resettlement, and to come to terms with the many losses they and their family have experienced.

Clinicians have a central role in this process, but also in advocating for the rights and welfare of children trapped within systems of deterrence and inappropriate detention.

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SERIES FOREWORD

The 20th century closed with a decade devoted to the study of brain structure, function, and development that, in parallel with studies of the human genome, has revealed the extraordinary plasticity of biobehavioral organization and development. The 21st century opened with a decade focusing on behavior, but the linkages between brain and behavior are as dynamic as the linkages between parents and children and between children and environment.

The Child Psychology and Mental Health series is designed to capture much of this dynamic interplay by advocating for strengthening the science of child development and linking that science to issues related to mental health, child care, parenting, and public policy.

The series consists of individual monographs or thematic volumes, each dealing with a subject that advances knowledge related to the interplay between normal developmental process and developmental psychopathology. The books are intended to reflect the diverse methodologies and content areas encompassed by an age period ranging from conception to late adolescence. Topics of contemporary interest include studies of socioemotional development, behavioral undercontrol, aggression, attachment disorders, substance abuse, and the role that culture and other contextual influences play in shaping developmental trajectories. Investigators involved with prospective longitudinal studies, large epidemiologic cross-sectional samples, or intensely followed clinical cases or those wishing to report a systematic sequence of connected experiments are invited to submit manuscripts. Investigators from all fields in social and behavioral sciences, neurobiological sciences, medical and clinical sciences, and education are invited to submit manuscripts with implications for child and adolescent mental health.

Hiram E. Fitzgerald
Series Editor

PREFACE

In 2002, Praeger Press launched a new series devoted to advancing understanding of the relationship between child psychology and mental health. The first volume focused on imaginative play in early childhood and subsequent volumes have examined a wide range of research, policy and practice issues influencing the mental health of children and adolescents. The collective force of the nine volumes published thus far has provided national stature for the Child Psychology and Mental Health series.

Although population diversity has been represented in past volumes, it has not been a central theme and therefore past volumes do not provide systematic coverage of the broad issues confronting minority populations. A chapter on juvenile justice disparities among Latino/a youth, one on tribal boarding schools, another on the historical impact of slavery on contemporary African American families, or the legacy of internment of Japanese families during the Second World War, does little justice to the rich set of issues affecting the mental health of children from America's increasingly diverse racio-ethnic population. Indeed, consensus population estimates indicate that by 2050 at least half of America's children will be members of groups that currently are defined as minorities. The American "melting pot" is being stirred up, guided by 21st century recipes that are far more multi-cultural inclusive than has been the case in past generations. Despite this unprecedented diversification, little is known about within and between group variation in life course pathways for mental health among minority children.

In providing justification for these volumes I noted that professional and public documents increasing draw attention to the pervasive problems affecting individual, family, and community development. It was not difficult to point out that the extraordinary number of children with poor self regulatory skills, school achievement, and family resources that place them at high risk for achieving successful developmental outcomes. Nor does one have to search hard to find documentation of the long-term effects of child abuse and neglect, gang violence, substance abuse, aggression, poverty, and the dissolution of a sense of community and civic responsibility. All are factors that have fueled a crisis in children's mental health in the United States and throughout the world. In many instances these issues disproportionately involve children and families of color, exacerbated because of poverty, institutional racism, and a deep sense of anomie. Conversely, in many other families of color, children succeed, families are functioning well, and individual hopes and aspirations are achieved. It is far less common to read about effective parenting, resilience, and life-course successes among minority families. Although single volumes have addressed many of these issues, including volumes written by many of the authors attached to the current series, there has been no comprehensive, focused attention directed to articulation of the core issues of child development and mental health within the major minority groups in the United States, or internationally.

The time frame from conception to postnatal age five years is vital for all children's development. It is during these years that children develop the neurobiological and social structures that will facilitate brain development and its expression in social-emotional control, self regulation, literacy and achievement skills, social fitness, health and well-being. However, while the early years are extraordinarily important in the organization of biopsychosocial regulation, a dynamic and contextual approach to life span development provides ample evidence that there are critical developmental transitions that elementary children, youth, adolescents, and emergent adults must negotiate if they are to construct successful life-course pathways. What also is clear is that public access to state of the art knowledge and recommendations about future scientific and public policy practices is limited by lack of concentrated information about developmental issues facing children and families whose skin color, culture, and racial identities are different from those of children in the dominant population.

This set of nine volumes targets the educated public, individuals who not only are responsible for public policy decisions, but those individuals who are responsible for raising America's children, voting for policy makers, and making decisions about policy issues that may or may not positively affect all children. Two volumes each will address child development and mental health issues in African American children, Latino/a children, Asian and Pacific-Islander children, and children from around the world. One volume covers the same content areas for American Indian and Alaska Native children. The collective nine volumes captures the state of the art in knowledge known and knowledge to know, and examines social and public policies that impede or enhance positive mental health outcomes among an increasingly significant portion of America's children as well as children around the world.

This project would not have been possible without the good will and hard work of a dedicated set of editors, uniquely selected for each two-volume set. Their efforts combined with commitments from an extraordinary group of social, behavioral, and life science scholars enabled completion within our projected two year project period. I cannot express deeply enough my thanks to authors for enduring countless email deadline announcements, quick responses to track changed manuscripts, and their good spirits throughout the editorial process. Of course, behind the scenes are the individuals who manage the production process. Prior to enrolling in graduate school, Lisa Devereaux provided initial assistance for tracking the flow of editor and author contacts. For most of the duration of the project, Julie Crowgey has served as the project manager, coordinating editors and authors and publisher to move the project toward its completion. She truly has been the glue that has held everything together. Additional thanks to Adina Huda and Gaukhar Nurseitova for their always perfect and prompt technical assistance with graphics. Finally, I must acknowledge Deborah Carvalko, Praeger editor, who conceived of the idea for the Praeger series and recruited my involvement. It has been a pleasure working with Deborah to produce all of the volumes in the Praeger series drawing attention to the interface between child psychology and mental health.

Hiram E. Fitzgerald

Chapter 1

IMPLICATIONS OF ATTACHMENT THEORY AND AN ATTACHMENT-BASED EARLY INTERVENTION FOR THE DEVELOPMENT OF VIOLENCE IN SOUTH AFRICA

Mark Tomlinson

John Bowlby's (1951) seminal publication for the World Health Organization, *Maternal Care and Mental Health*, charted the profound deprivations of World War II and the large number of children separated from their parents and the resultant behavioral difficulties experienced by many of these children. Murray and Farrington (2005) argue that a substantial body of research has confirmed Bowlby's assertion of a link between antisocial behavior and early family disruption.

South Africa is a middle-income country characterized by high levels of poverty and inequality. As in most low- and middle-income countries, the proportion of the population composed of young children is considerably higher than in developed countries (Schonteich, 2003). As a result of its apartheid past, conditions of adversity disproportionately affect the black South African population. The effects of poverty and the inequalities in South Africa are evident across all aspects of child development and are apparent in the high infant mortality rate, stunted growth, and high rates of early drop out from school and general low levels of educational attainment, homelessness, and criminality. To the best of my knowledge, there are at present no data from South Africa or Africa that make explicit the link between early parent–infant interaction and attachment, and later violent and criminal behavior. In the light of this, this chapter will briefly describe the levels of violence and crime that are characteristic of South Africa, present a theoretical outline of the ideas of Fonagy and colleagues (in particular) about the links between attachment, mentalization, and violent behavior, and then present some preliminary South African data about infant attachment in South Africa, its antecedents, as well as the implications of a community based early intervention project in South Africa for developmental pathways to violent conduct in children and youth.

CRIME AND VIOLENCE IN SOUTH AFRICA

Violence and injuries are the second leading cause of death in South Africa, while the injury death rate is almost twice the global average (Groenewald et al., 2008). From April 2008 to March 2009 there were 621,199 contact crimes against the person (murders, 18,148; assault, 203,177) and 141,107 contact related crime, which includes arson and malicious damage to property (Groenewald et al., 2008). In South Africa, among children in secondary school, 18.7% have had a personal experience of being beaten, punched, slapped, or kicked at home; 30.7% personally know someone who has brought a weapon to school; 67.9% have seen somebody else being intentionally hurt outside their home and 11.4% have witnessed household members hurting each other (two out of three cases being serious enough to warrant medical attention); almost 10% have parents or caregivers who have been in jail; and 20.2% have siblings who have at one time been in jail (Pelser, 2008). Violence against women is a particular problem with 55,000 rapes of women and girls reported each year, although it is known that most rapes go unreported (Seedat, van Niekerk, Jewkes, Suffla, & Ratele, 2009). Others report that 25% of South African men have admitted to committing rape (Jewkes, Sikweyiya, Morrell, & Dunkle, 2009). The number of men who kill their intimate partners in South Africa is six times the global average (Seedat et al., 2009). A dominant feature of violence in South Africa is the disproportionate role of young men as perpetrators and victims. The highest homicide victimization rates are seen in men aged 15–29 years (184 per 100,000) and in some areas, for instance in Cape Town's townships, rates are more than twice this number (Seedat et al., 2009). Children living in this context are exposed to ongoing adversity or what has been termed a *continuity of environmental challenge* (Sameroff & Rosenblum, 2006).

PARENTING AND SOCIAL ADVERSITY

An important question in seeking to understand the development of children growing up in such conditions concerns the nature of the parenting that is possible. Preoccupation with external problems (e.g., poverty, lack of partner support), as well as more immediate difficulties (e.g., trauma and losses), may directly affect the parent's capacity to be responsive to their child. Before dealing more specifically with parenting practices in the context of postpartum depression and the associated disturbances in the parent–infant relationship, I will briefly outline the structural constraints on, and the wider context of parenting. This is important if we are to avoid a narrow locating of all later violence in early parent–child or caregiver–child interactions.

Children living in areas of high adversity that characterize many poor countries such as South Africa are exposed to numerous environmental stressors including poverty, domestic violence, child abuse, and maltreatment, all of which are associated with adverse outcomes (Barbarin & Richter, 2001). The ecological model of human development offers a systems perspective that describes the factors that influence the interaction between parents and their children (Bronfenbrenner & Ceci, 1994). The model is a hierarchical one with four levels. These four levels of factors are sociocultural (macro system), community (exo system), family (micro system), and individual (ontogenic). The model outlines how social, community, family, and individual factors contribute to developmental outcome. With specific regard to parenting, the premise of the ecological model is that the effect of parenting is embedded in a myriad of social factors that may affect child development (O'Connor & Scott, 2007), and is useful in that it considers the ecological niche in which infants and children live. An important premise of this model is that there is a potentially inexorable covariation of risk factors in the environment of any child (O'Connor & Scott, 2007).

In such a system it is important to consider not only that poverty affects parenting but that parenting may also have an effect on poverty, creating "cycles of disadvantage" (Rutter & Madge, 1976). So, for example, a poor diet and smoking during pregnancy is associated with low birth weight. Smoking has been associated with youth aggression, while low birth weight infants require heightened levels of parental care and medical resources. Parents in poverty are less able to provide the heightened care necessary and may have little or no access to adequate medical interventions as a result of weak health systems. As a consequence infants have an increased likelihood of developing later developmental and cognitive deficits that place increased demands on parents, and increase the likelihood that as a result of poor performance they are more likely to drop out. When this occurs in a poor environment characterized by high crime levels and gangsterism the child is more likely to join a gang (if a boy) or become pregnant (if a girl), which in turn creates additional stress in a parenting system that is by this time severely compromised. This has implications for the parenting of that child but also other siblings. Adolescent girls in this context are more likely to take substances and eat poorly, which is likely to result in the second generation infant having a low birth weight, thus completing the cycle of disadvantage. In terms of the developmental trajectory of aggression, children whose levels of aggression remain high are more likely to have teenage mothers and mothers with low levels of education, which in turn are related to the development of aggressiveness in the next generation.

ATTACHMENT THEORY

Attachment and Self-Control

A common lay perception about the onset of violence is that children, by way of exposure to family violence, media images, and community violence, learn how to become violent. There is, however, an increasing evidence base of how, in fact, rather than learning "how to" be violent, children are in fact socialized out of violence. Tremblay (2006) has argued convincingly that the genesis of later offending lies in the aggressive behavior of two- to three-year-olds. Tremblay (2004) has shown how there is an increase in the number of acts of physical aggression from 9 to 48 months, and that aggression decreases substantially after this until adolescence. Adolescent violence is the age at which most of the focus on violence begins, but this is partly due to the increased physical strength that an adolescence has and the consequent damage that the adolescent is able to inflict. The punch of a four-year-old is unlikely to cause severe injury, while that of an adolescent may cause significant injury, or even death. Campbell (1990) has demonstrated that 50% of violent adolescents can be identified by the age of six. Having said this it should be borne in mind that while Tremblay's sample was a very large one it was not a high risk sample and so it is possible that socialization may be more effective than in high risk samples.

Fonagy and colleagues (Fonagy, Target, Steele, & Steele, 1997) have argued that the socialization of (this) natural aggression happens by way of the child developing self-control. They argue that many environments fail to provide young children with the means and skills with which to regulate their destructive potential. The development of self-control requires attentional mechanisms and the development of symbolization, both of which, according to Fonagy and colleagues, are firmly located in the early mother–infant relationship (Fonagy et al., 1997). For Fonagy and colleagues, the early development of attachment between a mother and her infant is a function of infant anxiety. It is anxiety at separation from the infant's secure base that drives the proximity seeking behavior of infants. However, if a child is "fearless," the ability of the parents and others to tame early aggressiveness will be compromised, and the attachment system will, in all likelihood, be dysfunctional (Fonagy et al., 1997). When anxiety drives an infant's search for contact with a caregiver, the ensuing interaction provides the "place" where the infant learns to tame his or her aggression. An additional "control" mechanism is the process whereby parents, through dyadic interaction with their infants and children, model nonaggressive ways to cope with frustration (or even aggression directed at them). Parents of insecure children are more likely to make use of anger as a way of dealing with a difficult situation, rather than modeling disengagement from a frustrating stimulus (Gilliom, Shaw, Beck, Schonberg, & Lukon, 2002).

Mentalization and Dysfunctions of Attachment

Fonagy and colleagues have coined the term *mentalization*, which they describe as the capacity to envision mental states in self and others (Fonagy et al., 1997). In their view, being able to mentalize is key to self-organization and is essentially the ability of children to read the mind of another, the capacity of human beings to understand the subjective experience of others (Fonagy, Gergely, Jurist, & Target, 2002). Fonagy and colleagues (1997) have argued that criminal behavior is often committed by individuals with an inhibition in the capacity to mentalize, and that when the mental state of another has been poorly represented violence against that person (against their mind) becomes possible. The reason most people do not engage in violent behavior is that they are able to identify with the mental state of the other (Fonagy et al., 1997). They make a coherent argument that without the capacity to mentalize, social agencies such as the family and schools would find it very difficult to carry out their socialization function. This latter point is of particular relevance to South Africa where, according to Pelser (2008), the youth uprising of 1976 and the continued rebellion during the 1980s critically wounded what he terms the key institutions of informal authority—the families and schools of South Africa. From a psychological perspective these two are the primary socializing agents in any society.

Fonagy (2004) posits three dysfunctions of attachment as possible precursors to violence. The first is where attachment experiences have been disrupted by social adversity and/or parental failure. In the conditions of socioeconomic adversity obtaining in many low- and middle-income countries, this may be one of the main reasons for the dysfunction of attachment. The second is problems of attachment that are related to temperament and situations where a "fearless" child does not seek out their caregiver during times of separation or stress, and as a result does not develop the capacity to mentalize through early dyadic interaction with a sensitive and attuned caregiver (Fonagy, 2004). A final dysfunction of attachment that may lead to later violence occurs when the ability to mentalize (perhaps in a nascent form) is destroyed by abuse (sexual or physical). One of the consequences of such abuse for the child is that they become so anxious that they in fact cease being able to think about the subjective experiences of others (Fonagy, 2004). Important in this regard however is that the callousness that arises as a result of the abuse and interpersonal violence directed against the child may in fact be adaptive in that early abuse may be indicative of a future need for interpersonal violence as a survival mechanism (Belsky, 1999; Fonagy, 2004). In summary, the development of an implicit sense of the minds of others is mastered within attachment relationships.

MATERNAL DEPRESSION AND INFANT ATTACHMENT

There is considerable evidence detailing how maternal depression results in less optimal maternal behaviors, such as unresponsiveness, insensitivity, intrusiveness, a lowered ability to assist infant affect regulation, and in lower levels of stimulation (Campbell & Cohn, 1997; Murray, Fiori-Cowley, Hooper, & Cooper, 1996). One of the consequences of such disturbances in the mother–infant relationship is an irritable and withdrawn infant who may be more likely to develop an insecure attachment to their remote or intrusive mother (van den Boom, 1994). The attachment status of children in conditions of adversity has received little research attention. While there have been numerous studies assessing infant attachment cross culturally (van IJzendoorn & Sagi, 1999), studies using Ainsworth's Strange Situation procedure in Africa are rare (True, Pisani, & Oumar, 2001). In one such study conducted in Mali with the Dogon people, high levels of both secure attachment (69%) and disorganized attachment (23%) were found. There is consistent evidence that early parental insensitivity, either in the form of intrusiveness and controlling behavior, or else underinvolved and unresponsive caregiving, is predictive of infant insecure avoidant (Belsky, 1999; Murray, 1992) and anxious-resistant attachment patterns (Belsky, 1999), respectively.

INFANT DEVELOPMENT IN SOUTH AFRICA

As I have argued, the capacity of a parent to be responsive to their child is affected by conditions of pervasive adversity. In terms of Fonagy and colleagues' first dysfunction of attachment this may be further compounded by maternal mental health problems, in particular, by the occurrence of depression. In a study conducted in Khayelitsha, a periurban settlement near Cape Town, the point prevalence of maternal depression at two months postpartum was 34.7% (Cooper et al., 1999), a rate almost three times the rate in rich countries (O'Hara, 1997). Depressed mothers in Khayelitsha were significantly less sensitive to their infants in early face-to-face interactions than were nondepressed mothers, and the infants of depressed mothers were less positively engaged with their mothers (Cooper et al., 1999).

In a follow-up of this sample when the infants were 18 months old, 61.9% of the sample were rated as secure. The most common insecure category, evident in 25.8%, was disorganized. In this sample 12.4% of the mothers were depressed at 18 months (Tomlinson, Cooper, & Murray, 2005). In the group of insecurely attached infants, 54.1% of mothers had experienced depression at two months postpartum compared to only 28.3% of the mothers of securely attached infants. Maternal remote-disengagement and maternal intrusive-coercion (at two months) and maternal sensitivity (at 18 months) emerged as significant independent predictors of infant attachment.

High Rates of Secure Attachment

Van IJzendoorn and Kroonenberg (1988) found that when using the original Ainsworth secure and insecure classifications 67% of infants are classified as secure. The proportion of secure attachments in Khayelitsha falls between these two figures. This was unexpected given the extreme levels of social adversity. Nevertheless, results of other studies of developing world populations are consistent with our own. Thus, Zevalkink, Riksen-Walraven, and van Lieshout (1999) found similar rates of secure attachment in a high risk Indonesian sample, and argue that, despite adverse living conditions, mothers of secure children were able to create a sufficiently good personal environment for the healthy emotional development of their children. Similarly, True, Pisani, and Oumar (2001) found high levels of secure attachment in Mali, in a community characterized by extremely high levels of adversity. Together these studies suggest that the mechanisms operating in poor communities in rich and poor countries may be different. One possible explanation for the high rate of secure attachments in Khayelitsha is the protective contribution of Xhosa social and cultural organization (even in the midst of extreme poverty). Despite the extreme levels of adversity and the legacy of the apartheid system that systematically attempted to destroy family structures and community cohesion, there still exists a humanity and compassion in Khayelitsha for neighbors and the wider community. In African parlance this notion of community spirit and compassion for others is known as Ubuntu. Infants and young children are seen as belonging, to some extent, to the community, and responsibility for their safety and well-being is seen as a collective responsibility. In addition, the combination of extremely close dwellings and small houses facilitates a great deal of social interaction in the narrow portions of space in front of houses or in the street. This high density living, and the communal nature of much of Xhosa culture (Chalmers, 1990), combined with the survival imperatives of living in extreme poverty (many mothers depend at times on the assistance of friends and neighbors to, quite literally, feed their children) may mean that some of the more negative social consequences of poverty that are often present in richer societies do not arise.

Disorganized Attachment

A quarter of the attachments in Khayelitsha were found to be disorganized, compared to 15% reported by van IJzendoorn, Goldberg, Kroonenberg, and Frenkel (1992). While these rates of disorganized attachment are high, they are consistent with rates of disorganized infants in other low-income samples (Schuengel, Bakermans-Kranenburg, & Van IJzendoorn, 1999). In the Mali study, True and colleagues (2001) also found a high proportion of disorganized infant attachments (25%), together with a complete absence of avoidant attachment. Lyons-Ruth and Block (1993) noted that disorganized infant attachment behaviors occur predominantly in the context of maternal childhood experiences of family abuse or violence, and that the severity of this violence is related to hostile and intrusive maternal behavior. Levels of family violence, rape and sexual and physical abuse are extremely high in South Africa (Dawes, 2002). In addition, the impact of HIV/AIDS as a factor in the preoccupations of women is crucial. HIV/AIDS prevalence rates are high in South Africa (around 10%), and are a common source of concern in communities like Khayelitsha. Given the similar distributions of disorganized attachment found in Mali and in Khayelitsha, it is possible that it is the high level of psychosocial stress which obtains in both samples that, by virtue of its impact on maternal preoccupations, accounts for the predominance of disorganization in these samples.

Low Rates of Avoidant Attachment

In Khayelitsha, only 4.1% of the infants were classified as avoidant (compared to 22% reported by van IJzendoorn, Goldberg, Kroonenberg, and Frenkel (1992). Both the True et al. (2001) and the Zevalkink, Riksen-Walraven, and van Lieshout (1999) studies found similar low levels of the avoidant pattern in Mali and Indonesia, respectively. True and colleagues (2001) argue that the caregiving practices associated with infant avoidance, such as rejection of attachment bids and the lack of close physical contact or tender holding, infant avoidance, are simply not found in the Dogon (True et al., 2001). Zevalkink and colleagues (1999) make a similar argument in accounting for the low rate of infant avoidance in their sample: the Indonesian norm of responding to crying, they argue, makes a rejecting or neglecting attitude of the mother more difficult to develop. Many of the homes in Khayelitsha consist of only one room, resulting in all the mother's daily activities occurring in the presence of the infant. Together with demand feeding and close sleeping arrangements (in this sample 96% of the infants were still sharing a bed with their mother at 18 months), this contributes to high levels of maternal physical availability. This close proximity makes maternal rejection of infant attachment bids during distress less likely.

Furthermore, just as in Mali and Indonesia, the norm in Khayelitsha is to respond to the crying of the infant with feeding. Much like Ainsworth's (1977) description of the Ganda infants, infants in Khayelitsha breast-feed on demand, making the attachment figure and the source of nourishment the same. In addition, weaning usually takes place between a year and two years, once an attachment has already been established. True et al. (2001) argue that in a context where mothers "often enough" respond to hunger and distress signals with breast-feeding, nursing operates as an intermittent reinforcer of the infant's attachment bids. In their work with the Gusii in East Africa, using a home-based separation-reunion procedure, Kermoian and Leidermann (1986) found that the only infants in their sample who were classified as avoidant were those who were not breast-fed by their mothers. An additional factor that may contribute to the low level of avoidant attachment in Khayelitsha is the practice of infant carrying. Infants are frequently carried on their mothers' backs. Notably, Anisfield, Casper, Nozyce, and Cunningham (1990) found that increased physical contact between mother and infant (by way of a baby carrier) promoted secure attachment among infants of low-income, inner-city mothers; and that the rate of avoidant infant attachment was significantly lower among those who used the baby carriers

EARLY INTERVENTION

The results of longitudinal research on the sequelae of insecure, and particularly disorganized, attachments in the context of poor communities (Lyons-Ruth, Connell, & Grunebaum, 1990; Zeanah, Boris, & Scheeringa, 1997) suggest that the processes identified in the Khayelitsha study of attachment may account, in part, for the aggressive trajectories of many South African youth. The finding that early difficulties in maternal interactions with the infant were significantly associated with adverse infant outcome, even when current maternal circumstances and interaction patterns were taken into account, highlight the potential importance of early intervention. How early attachment patterns either become modified, or else translate into subsequent maladaptive patterns of functioning, is in need of investigation.

Webster-Stratton and Taylor (2001) have argued that early intervention is imperative in order to “nip problems in the bud . . . before they become a cascade of risk factors” (p. 167). Pelser (2008) has recently argued that there is an increasing evidence base that shows that the impact of factors such as family dissolution, unemployment, household overcrowding on whether children and adolescents become involved in criminal behaviors is mediated by parenting variables (Laub & Sampson, 1988), while it has also been shown that parenting factors mediate the effect of structural factors on crime (Pelser, 2008).

Compelling evidence of the effectiveness of early interventions in improving a variety of maternal and child health outcomes has accumulated in relation to high risk populations in rich countries (Olds, Kitzman, Cole, & Robinson, 1997). Notably, the content and methods of some of the most effective interventions have the principles of attachment theory at their core (Olds et al., 1997). Attachment is fundamentally about relationship, and I would argue that the provision of supportive relationships to parents, and the promotion of good parent–child relationships, should be at the core of all early intervention models. In the light of the socialization model of Fonagy and colleagues, interventions that focus on early parenting with an explicit intention to target early infant attachment, are likely (if successful) to have an impact on long-term aggressiveness.

The Khayelitsha Mother–Infant Intervention

The Khayelitsha mother–infant intervention was targeted specifically at improving the parenting relationship. There have been several trials of early interventions aimed at improving maternal sensitivity and reducing infant attachment insecurity. These studies have produced encouraging findings, with a meta-analysis of 70 intervention studies showing that both maternal sensitivity and infant attachment security were improved (Bakermans-Kranenburg, van IJzendoorn, & Juffer, 2003). Cooper et al. (2002) carried out a pilot intervention to determine whether an early intervention delivered in a periurban settlement in South Africa would similarly be of benefit. In a small case series, compared to women not receiving an intervention, those who had home visiting from trained mothers from the community were found at six months postpartum to be more sensitive in engagement with their infants and to express more positive affect.

The same team conducted a randomized control trial in Khayelitsha, South Africa. The intervention was based on an adaptation of a health visitor preventive intervention program devised for implementation in Britain, which itself closely follows the principles contained in *The Social Baby* (Murray & Andrews, 2002). This program was adapted for the Khayelitsha project by incorporating the key principles of the World Health Organization document *Improving the Psychosocial Development of Children* (World Health Organization, 1995). The aim of the intervention was to encourage the mother in sensitive, responsive, interactions with her infant. A major aspect was the use of particular items from the Neonatal Behavioral Assessment Schedule (NBAS) (Brazelton & Nugent, 1995) to sensitize the mother to her infant's individual capacities and needs. The intervention was delivered by women resident in Khayelitsha. The women had no formal specialist qualifications, although all were mothers. Two had completed schooling. They received training in basic parenting and counseling skills, as well as in the specific mother–infant intervention; they were provided with weekly group supervision throughout the study by an experienced community clinical psychologist. The intervention was delivered in participants' homes in hour-long sessions. The women in the index group were visited twice antenatally, twice in the first postpartum week, weekly for the next seven weeks, fortnightly for a further month, and then monthly for two months (15 sessions in total, ending at five months postpartum). Those in the control group received the normal service provided by the local infant clinic. This involved being visited by community health workers who made assessments of maternal and infant physical and medical progress. Mothers were also encouraged to take their infant to the local clinic to be weighed, to have their infants' physical health assessed and to be immunized. Mothers and infants were assessed at six and 12 months postpartum when mother–infant interactions were observed; and at 18 months postpartum when infant attachment was formally assessed.

Compared with women who received no specific help or support, women who received a home-based intervention interacted with their infants with greater sensitivity and with less intrusiveness, both shortly after completion of the intervention (6 months postpartum) and at a longer-term follow-up (12 months postpartum). At 18 months postpartum infants whose mothers had received the intervention were more likely to be rated as securely attached to their mothers than were infants of control group mothers. Given the reliable relation between early insecure attachment and later childhood behavioral problems, the fact that more than 10% fewer of those who received treatment were insecure compared with the controls means that early intervention could have the potential to make an important contribution to reducing the rate of subsequent childhood disturbance.

Although there was no difference between treated and untreated mothers in terms of the prevalence of depressive disorder, the intervention had some benefit in terms of maternal mood at six months. The limited effect of the intervention on maternal depression is consistent with other research showing that interventions principally directed at the mother–infant relationship do not necessarily bring about improvements in maternal mood (Nylen, Moran, Franklin, & O'Hara, 2006). Prevalence of depressive disorder in both the control and the intervention group in this study were somewhat lower than those found in our previous epidemiological study, possibly reflecting the steady improvement in living conditions in the intervening period, which may have alleviated a key source of distress in the women's lives. The positive impact of the intervention on infant attachment is in line with the findings of previous research on the benefit of early mother–infant interventions, although, to our knowledge, this is the first demonstration of such a benefit in low- and middle-income countries. The effect size for maternal sensitivity is similar to the difference in sensitivity between depressed and nondepressed postpartum women living in conditions of adversity in the United Kingdom (Cooper et al., 1999; Murray, Fiori-Cowley et al., 1996) a magnitude of difference that strongly predicts adverse cognitive development (Murray, Hipwell, Hooper, Stein, & Cooper, 1996).

The findings of this study show that the benefits to the mother–infant relationship of an early intervention in rich countries similarly obtain in the adverse periurban conditions of Khayelitsha. The intervention was delivered by women from the local community who had no formal training, apart from that received from the study team for delivery of the intervention. In addition, they had a focused task (rather than responsibility for comprehensive community health), they were given appropriate support and supervision, and they had strong community support, all of which are regarded as essential for effective community health worker programs (Haines et al., 2007). These are also the important constituents of interventions that could be "scaled up" in poor countries with relatively limited resources. Clearly, the design of the study precludes any discussion of whether similar, or superior, outcomes might have been achieved if a different form of intervention had been delivered.

The attachment finding is crucial in that as Fonagy (2004) argues the socialization of natural aggression occurs through the development of self-control. Self-control in turn requires the development of symbolization which itself develops as a function of the parent–child relationship (Fonagy, 2004). For Fonagy, a poorly functioning attachment system is therefore likely to be instrumental in the development of later aggression and violence. Dodge, Bates, and Pettit's (1990) proposal of a social information processing model as one explanation for how processing biases may lead to an increase in violent behavior is also useful here. The model suggests that aggressive children are hypersensitive to threat (attribute hostility to the action of the other) and overlook other contextual factors (accidental collision) that may more readily explain the behavior of another (Crick & Dodge, 1994). From an attachment perspective, negative attachment experiences are centrally implicated in the development of a sense of self and the processing of social interactions (Bradshaw & Garbarino, 2004), and by extension, the hostile attributions inherent in the processing of social interactions so characteristic of aggressive children. Bradshaw and Garbarino (2004) argue that successful prevention initiatives such as the Olds program that target the early caregiver–child relationship, are likely to influence social-cognitive processes. It is the intention of the Khayelitsha team to assess the children in both groups at age seven to eight years to establish whether in fact the early improvements in the mother infant relationship and attachment relationship have influenced social-cognitive processes and by extension reduced levels of aggression in these children.

CONCLUSIONS AND IMPLICATIONS

In the light of the current levels of crime and violence in South Africa, together with the significant international literature detailing the links between early interaction, attachment, and later aggressive outcome, the findings from South African attachment research raise a number of important questions. First, data from the existing evidence base of early mother–infant relationship and attachment needs to be replicated both in South Africa as well as other low- and middle-income countries experiencing high levels of violence. Second, most data on early interactive processes has been conducted with mothers and their infants. As Fitzgerald, McKelvey, Schiffman, and Montanez (2006) have shown, the role of fathers in early development is central. The role of fathers in early infant development and infant attachment as well as in understanding early contextual risk is in need of research attention. Third, longitudinal data is crucial to determine whether the improvements in early interactions and infant attachment are realized in subsequent positive developmental outcomes in children. The children living in areas such as Khayelitsha are at considerable risk of poor physical and emotional health, violence, educational failure, and a host of other associated adverse outcomes (Barbarin & Richter, 2001). If the improvements in mother–infant interactions and infant attachment were shown to be of benefit in terms of these long-term outcomes, this would be very important.

With specific reference to the findings of the Khayelitsha study, the rates of avoidant and disorganized attachment were low. This is encouraging as it is these forms of insecure attachment that have been associated with subsequent conduct problems in children (Belsky & Fearon, 2002). Finally, the positive results produced in this study arose in the context of a tightly delivered randomized controlled trial. Whether this intervention can be developed into a sustainable and widely available service that produces benefits similar to those obtained in this study needs to be investigated. The fact that such positive outcomes were obtained by using lay therapists is particularly encouraging in this regard. This suggests that the intervention may be sustainable and has the potential to be scaled up at low cost in resource constrained settings.

Current responses to the endemic violence in South Africa are numerous and invariably involve heightened and more aggressive police action, more prisons and longer periods of incarceration. The data presented here suggest that much of the solution lies “closer to home” in the interactions between infants and their caregivers, and in the development and sustaining of close reciprocal relationships throughout the life span.

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Chapter 2

DEVELOPING CHILD AND ADOLESCENT MENTAL HEALTH SERVICES IN LOW- AND MIDDLE-INCOME COUNTRIES

Amina Tareen and Atif Rahman

Despite increased attention to mental health in low- and middle-income (LAMI) countries, services for adolescents and children, who comprise 40%–50% of the population in these countries, have remained neglected (Chisholm et al., 2007). Evidence suggests that approximately half of adult mental health disorders have an onset before the age of 14 (Kessler, Berglund, Demler, Jin, & Walters, 2005; Kim-Cohen et al., 2003). Poor mental health in young people is associated with a host of other difficulties including poor educational attainment, substance misuse, violence, and poor reproductive and sexual health (Patel, Flisher, Hetrick, & McGorry, 2007). The previous chapters describe some of the advances in our understanding of the etiology and management of childhood mental disorders. Such advances have to be matched with the development of feasible, culturally appropriate and accessible programs and services for children and adolescents so that the benefits of these advances can benefit the population. For most LAMI countries, this remains a great challenge. This chapter describes some of the issues involved in meeting this challenge.

THE SCOPE OF THE PROBLEM

Estimates of the prevalence of child and adolescent mental disorders range from 3% to 18% in high-income countries (Costello, Foley, & Angold, 2006). The evidence from LAMI countries suggests similar rates. Earlier studies from Sudan, India, the Philippines, and Columbia in 1981 reported prevalence rates of 12%–29% in children presenting to primary care facilities (Giel et al., 1981). A more recent review of studies from six countries in Latin America found similar rates of disorders at 15%–20% (Duarte et al., 2003). In another primary care based study from Nigeria, 990 children aged 7–14 years were interviewed with their mothers and the prevalence of psychiatric disorders was approximately 20% (Gureje, Omigbodun, Gater, Kuesan, & Orris, 1994). Alyahri and Goodman (2008) reported rates of DSM-IV disorders of 15.7% in Yemeni schoolchildren between the ages of 7 and 10 years old. A prevalence study of emotional and behavioral problems in 6- to 12-year-olds in Egypt found prevalence rates of probable psychiatric diagnoses of 8.5% but higher rates of symptoms according to parental and teacher report (Elhamid, Howe, & Reading, 2009). A survey of school children in Sao Paulo, Brazil, and surrounding areas found that 12.5% had psychiatric disorders (Fleitlich & Goodman, 2001). In community surveys, Hackett and colleagues (1999) found prevalence rates of 9.4% among 8- to 12-year-old children in Calicut, south India. Based on these estimates, it would be safe to assume that 10%–20% of children living in LAMI countries suffer from a clinically significant mental disorder.

In order to fully understand the burden associated with child and adolescent mental disorders and plan appropriate services, traditional epidemiological studies need to be refined by including a framework to assess impairment (Belfer, 2008). Impairment associated with a disorder is influenced by a number of factors within the child's environment as it is essentially the child's ability to meet the demands posed by family, friends, relatives, and school (Cluver & Gardner, 2007). It is typically measured by comparison to their peers and therefore will be significantly influenced by culture and context (Canino, Costello, & Angold, 1999). The extent to which psychiatric disorders are universal across cultures or relative to cultures and background has long been debated and a good account of the current status of knowledge is provided by Canino and Alegria (2008) in a recent review. This factor will influence the development of services—for example, assessment and diagnosis for attention deficit disorder may be a higher priority in places where formal schooling is universal.

DEVELOPMENTAL AND ENVIRONMENTAL RISK FACTORS IN THE CONTEXT OF LAMI COUNTRIES

A number of the risk factors associated with poor child mental health are more prevalent in low- and middle-income countries. These factors need to be taken into account when policy and services are being planned.

In order to be effective, child mental health services will need to be developed together with policies and programs that address these factors.

Poverty

Research funded by the UNICEF (Gordon, Nandy, & Pantazis, 2003) explored childhood poverty in the developing world and collected survey data on children in 46 countries. They found that over 1 billion children suffer from severe deprivation of basic human needs and over a third of all children in the countries surveyed suffered from absolute poverty.

The association between poverty and adverse outcomes for children is a well researched one, certainly in high-income countries (Duncan & Brooks-Gunn, 1997; Engle & Black, 2010; Yeung, Linver, & Brooks-Gunn, 2002). Associations have been reported on a wide range of measures including children's physical, cognitive, educational, social, and emotional outcomes (Duncan, Brooks-Gunn, & Klebanov, 1994). The effects are long-standing, continuing into adolescence and adulthood. Research shows that the effects are most significant when poverty is persistent and when the level of poverty is significantly below the poverty threshold (McLoyd, 1998). Researchers have suggested there is a differential effect, with more significant impact on children's cognitive and educational outcomes (Smith, Brooks-Gunn, & Klebanov, 1997).

Poverty influences children's developmental outcomes, through various pathways. Poor children are more likely to grow up in households that are less cognitively stimulating, as parents are less able to invest in resources that would stimulate their learning (Duncan et al., 1994). Another postulated pathway is through family processes, with monetary difficulties leading to psychological distress in parents, which in turn makes them less responsive to their children, and more likely to display harsh parenting practices which lead to adverse child outcomes (Conger et al., 1992; Haveman & Wolfe, 1994).

Similar negative effects have been found in LAMI countries, where prevalence rates of poverty are much higher. Fleitlich and Goodman (2001) carried out a cross sectional survey of school children between the ages of 7–14 years in three contrasting neighborhoods in a Brazilian district, a shanty town, a stable urban neighborhood, and a rural village and found significant associations of child mental health problems with poverty as well as with maternal mental illness and witnessing family violence.

The Young Lives Project is an ongoing international study of childhood poverty, involving a cohort of 12,000 children from four developing countries, Ethiopia, India, Peru, and Vietnam, over a period of 15 years (Dercon & Krishnan, 2009). The study describes the correlation between poverty and psychosocial competencies in 12-year-old children—self-esteem, self-efficacy, and educational aspirations all correlated with measures of material well-being.

Malnutrition

Rates of malnutrition in LAMI countries are high, with almost a third of all children under five reported to be suffering from clinically relevant undernutrition (UNICEF, 2006). Malnutrition impacts on children's development, including motor, language, and cognitive development (Grantham-McGregor et al., 2007). It is associated with impaired ability of caregivers to provide adequate psychosocial stimulation, thereby compounding developmental delays and mental health problems. Children of school age who experienced malnutrition in early childhood have lower IQ levels and poorer cognitive functioning. They do less well in school and have greater behavioral problems than matched controls (Grantham-McGregor, 1995). Galler and colleagues carried out a longitudinal study of Barbadian children with malnutrition. Using both teacher and parent behavior checklists at different ages, they found attentional difficulties in 60% of the children with histories of malnutrition compared to 15% in controls. They also found increased rates of aggressive behavior and poor socialization (Galler & Ramsey, 1989; Galler, Ramsey, Solimano, & Lowell, 1983).

A recent study carried out in rural Bangladesh highlighted the association of malnutrition with particular temperamental and behavioral characteristics. The researchers compared 212 undernourished children with 108 better-nourished children and found that the former were less sociable, less attentive, more fearful, and had more negative emotionality as compared to the better-nourished group (Baker-Henningham, Hamadani, Huda, & Grantham-McGregor, 2009).

Wachs and colleagues (2009) provide four possible models to illustrate how nutritional deficiencies can translate into adult or child mental health problems. The first of these is the multiple risks model, derived from evidence showing an association between nutritional deficiencies and other life stressors. As poorly nourished adults are less able to cope with additional stresses thus this could result in impaired mental health. Second is the cross-generational model, where mothers who are poorly nourished provide less positive interactions and psychosocial stimulation to their children. This in turn increases the chances of child mental health problems and the risk of subsequent child nutritional deficiencies. The third model is the attachment model, which comes from evidence showing that a vicious cycle develops with malnourished infants showing decreased psychomotor activity and becoming more apathetic and less demanding, which in turn decreases parental interactions as the mutual interaction becomes less rewarding. Poor attachments in infancy are associated with an increased risk of both short-term and long-term child mental health problems. Lastly, the temperament model is based on evidence showing that certain patterns of infant temperament are related to an increased risk of later behavioral problems. Infant nutritional deficiencies can influence the development of temperament, as reported earlier.

Intellectual Disability

LAMI countries have much higher rates of intellectual disability (Institute of Medicine, 2001).

Most studies of severe intellectual disability report rates of 5 per 1,000, while in high-income countries rates are much lower. Reasons for higher rates of disability include specific genetic diseases, higher frequency of births to older mothers, consanguinity, poor obstetric care, including trauma and infections, malnutrition and specific micronutrient deficiencies, and metabolic disorders (Durkin, 2002).

Maulik and Darmstadt (2007) in their review of epidemiological studies of intellectual disability in low- and middle-income countries found rates varying from 0.09% to 18.3%. The wide range is not only due to actual differences but also contributed to by different diagnostic systems used as well as differences in sources of the data. Recent reviews of policies and services for children with intellectual disability from low-income settings have highlighted significant needs and gaps in provision (Jeevanandam, 2009; Njenga, 2009).

Children with intellectual disability also have markedly increased prevalence of psychiatric disorders with prevalence rates of 35%–40% described in a number of studies from high-income countries (Einfield & Tonge, 1996; Stromme & Diseth, 2000). Several factors have been found to account for this. Lower IQ in children without intellectual disability predisposes them to increased risk of psychopathology. Also children exposed to psychosocial disadvantage are at increased risk of psychopathology and children with intellectual disability are more likely to experience psychosocial disadvantage. The biological components of some types of intellectual disabilities are associated with particular types of psychopathology (Einfeld & Emerson, 2008).

The commonest comorbid psychiatric conditions with intellectual disability are autistic spectrum disorder, hyperkinetic disorder, and conduct disorder. Emerson and Hatton (2007) found that a significant proportion of the increased risk of psychiatric disorder could be accounted for by the increased risk of psychosocial disadvantage experienced by children with intellectual disability, which has important policy and public health implications for developed and developing countries alike. Furthermore, without intervention, psychopathology tends to persist into adulthood (Einfeld & Emerson, 2008).

Orphans and Vulnerable Children

In the developing world, 143 million children—1 in every 13—are orphans (Cluver & Gardner, 2007). Research in recent years has focused on mental health outcomes in children orphaned by AIDS and found that such children are at a higher risk for both internalizing and externalizing disorders. A review of studies on the mental health of children orphaned by AIDS found that out of 13 controlled studies measuring internalizing problems, 10 found evidence of increased difficulties. Of the 7 controlled studies measuring externalizing behaviors, 3 found evidence of increased difficulties (Cluver & Gardner, 2007).

War and Terrorism

War and terrorism exposes children to a range of risk factors, including the risk of dislocation, separation from family, and loss of loved ones (Joshi & O'Donnell, 2003). They are at risk of neglect and abuse if they are left without adult care. Emotional and behavioral consequences include acute stress reactions, posttraumatic stress disorder, anxiety and depressive disorders, regressive behaviors, sleep problems, and behavior problems (Fremont, 2004). However, research from developing countries exposed to war and terrorism highlights the need to develop comprehensive services rather than disorder specific services as interventions need to tackle other associated problems for them to be effective. Jones and colleagues (2003) describe the development of a CAMHS service in war-affected Kosovo. It originated from an emergency program to address the mental health needs of local children by Child Advocacy International and evolved into a community-based service. Stress-related disorders constituted a fifth of the caseload in the first year of the service, with a substantial number of patients attending following a traumatic event, thinking it might make them ill. In the following year learning disability and enuresis were the most common diagnoses. The authors concluded that mental health services that only addressed traumatic stress were insufficient to meet the needs of war-affected children. A comprehensive, culturally appropriate CAMHS is needed to address a wide range of problems, including learning disability.

In summary, many of the same bioecological and contextual risks that are commonly encountered by children growing up in poverty in LAMI countries are also encountered by poor children growing up in high-income countries. However, the preceding section gives examples of certain types of contextual risks that are primarily seen in LAMI countries. Intervention programs and service development in these countries should therefore not simply mirror those in developed countries but would need to be cognizant of the very different profile of risk that these children are exposed to.

CHALLENGES TO SERVICE DEVELOPMENT

Paucity of Child Mental Health Policy and Child Mental Health Systems

In 2004 the World Health Organization, in collaboration with the World Psychiatric Association, launched the Child Atlas project to collate information on mental health services for children and adolescents around the globe (World Health Organization, 2005). The hope was that it would stimulate gathering of information and support the development of structures around child and adolescent mental health and child mental health policy development. A key informant method was used and questionnaires were sent to key individuals in all 192 countries. However, responses were received from only 66 countries. Worldwide, only 7% of countries identified a well-developed, specific child and adolescent mental health policy. A Child and Adolescent Mental Health Policy Module was developed to guide on policy development to support child and adolescent mental health services.

Without a mental health policy, there can be no sustained development of services. There is a need for specific policy targeting children and adolescents, separate from mental health policy in general. Local stakeholders have an important role in guiding policy makers and service providers. For this to happen there must be public awareness of need combined with a demand for services. In LAMI countries, the impetus to develop child mental health services often arises out of incidental major disasters or traumatic events such as the earthquakes in Turkey and Pakistan (Munir, Ergene, Tunaligil, & Erol, 2004; Siddiqi, Siddiqi, Saeed, & Oliver, 2006). Such services seldom evolve to meet the needs of nonemergency situations and are therefore not sustainable.

Ongoing advocacy is necessary, as political priorities may change with successive governments. Knowledge about the rates of mental disorders and highlighting the burden and the cost to society can be a crucial tool in convincing politicians and policy makers that the disorders have important public health implications. Child mental health is not the sole preserve of child mental health services and a number of other agencies are impacted by it and have an important role to play in supporting it. These include education, social care, and criminal justice. Collaboration and joint working between these agencies is essential to provide a comprehensive mental health service for children.

Scarcity of Specialized Manpower

Even in developed countries, only about 20% of children and families in need of mental health services gain access to them (Kataoka, Zhang, & Wells, 2002). This is due to a combination of factors, including poor identification, barriers to accessing services, and scarcity of specialized manpower (Flisher et al., 1997). All of these factors will be relevant in LAMI countries.

The Child Atlas project found that less than 10% of child mental health services are provided by primary care physicians. They are likely to be the first port of call for most families and hence key professionals to target for supplementary training. Similarly, only 10 out of the 66 responding countries reported that more than 25% of local pediatricians had received mental health training and yet, in 37 of the countries surveyed, pediatricians were caring for the mental health needs of children and adolescents (Belfer & Saxena, 2006). When initiatives to develop child mental health services were introduced in low resource settings, other physicians, including pediatricians were found to be major referrers, pointing to a need to develop their child mental health training and ability to appropriately manage these young people (Syed, Hussein, & Yousafzai, 2007). If child and adolescent mental health issues are incorporated in their under- and postgraduate curricula these health professionals will be more equipped to provide appropriate management. They would need suitable simplified assessment and treatment tools, to enable them to manage less complex cases.

In summary, there is a paucity of services and trained professionals to meet the needs of the vast majority of children with mental health problems in LAMI countries. Attention needs to be focused on using the scarce specialist resource judiciously, providing consultation and supervision to other services for children, in order to maximize benefit. These would include schools, nurses, primary care physicians, pediatricians, and agencies working with vulnerable children such as state orphanages and facilities for children with disabilities (Belfer & Rohde, 2005). Professionals in other sectors working with children (teachers, school counselors, social workers) should be targeted in diffusing efficacious interventions for child mental health problems (Graeff-Martins et al., 2008).

PLANNING SERVICES

It is evident from the above that low- and middle-income countries, where much of the risk and burden of mental and neurological disorders is found, also have less developed mental health services, hence there is a significant gap between what is needed and what is available (Patel et al., 2007). In order to plan services, an initial step will be mapping out what is currently available. Rahman, Mubbashar, Gater, and Goldberg (2000) describe a useful framework for the planning of services and setting of priorities for child mental health in LAMI countries (Table 2.1).

A useful tool to aid in planning services is the World Health Organization Assessment Instrument for Mental Health Systems, developed primarily for low- and middle-income countries to enable them to assess their current systems and map out strengths and weaknesses as well as monitor development over time. Data is collected for six domains—namely, the current policy and legislative framework, existing mental health services, incorporation of mental health within primary care, available human resources, public education and links with other sectors, and plans for monitoring and research (World Health Organization, 2005).

Lund, Boyce, Fisher, Kafaar, and Dawes (2009), in South Africa, provide a model to plan child mental health services. They carried out a situation analysis by surveying provincial mental health care coordinators and carrying out field visits in order to determine how many children and adolescents with mental health disorders were seen and the number and type of staff employed in local services. They developed a spreadsheet model to calculate mental health resources required, based on an estimation of the need for services in a given population (using epidemiological data) and also consultation with key stakeholders. They calculated costs for full coverage and minimum coverage per child or adolescent per annum which was based on a transparent modeling exercise using the above data .The model can be adapted to other settings by using data from each local context and the authors advocate for using it as a tool to engage

Table 2.1
A framework for needs assessment and priority setting

Type of assessment	*Methodology*	*Types of questions addressed*	*Examples*
Epidemiological	Observational (preferably longitudinal) and intervention studies	What is the *magnitude* of the problem? Either incidence or prevalence rates. What is the *severity* of the problem measured in terms of mortality, disability, quality of life, burden on families, or economic loss? What is the *controllability* of the problem? In other words, is there evidence that there are effective and culturally valid interventions to prevent, treat, or provide rehabilitation for the problem?	Giel et al. (1981) carried out a four-country epidemiological study in Sudan, Columbia, India, and the Philippines. They found prevalence rates of 12% to 29% for child psychiatric disorders. Only 10% to 22% of these cases were recognized by primary health workers. These early studies highlighted the need to set up child mental health services in LMIC.
Comparative	National, regional, and global surveys	What are the *available resources* to tackle the problem? Are the human, technical, administrative, and infrastructure resources available locally, and if not, what is needed to achieve and sustain them? What are the *institutional commitments*? Does this development integrate with other programs, or does it have knock-on effects that increase or offset the costs or burden on other services?	Sartorius and Graham (1984) carried out national case studies on child mental health services in eight countries. They used direct (where available) and indirect measures of morbidity to gauge child mental health needs in these countries. The information on service use and provision was compared with other districts or with national estimates of the need for certain kinds of services.
Corporate	Key informant interviews, focus groups	What is the *importance* attached to the problem by those directly affected by the problem, their families, the technical sector, the public, and policy makers? A program is unlikely to succeed without the interest and participation of the community. Is the program *sustainable*?	Wig et al. (1980) carried out a key informant study in three developing countries to study the perceptions of mental illness and their consequences in the community. The results were used to select priorities and design interventions to promote community involvement.

with planners and policy makers in order to set targets for local service development. Similarly, Fayyad, Jahshan, and Karam (2001) describe their experience of systems development for child mental health in Lebanon, with particular reference to developing appropriate services for their local population. Research at the local level was carried out, in order for it to be meaningful to policy and planning officials. To enable optimum use of scarce resources, they focused on areas locally identified as a priority.

MODELS OF CHILD MENTAL HEALTH SERVICES IN LAMI COUNTRIES

The preceding section makes it clear that models of child mental health (CMH) services for children and adolescents in LAMI countries have to give careful consideration to the prevalence, burden, risk factors for child mental disorders, as well as the scarcity of resources and specialized manpower. The main approach advocated for LAMI countries is the integration of mental health care with primary care. There is a substantial body of evidence that indicates that CMH services can be integrated into the primary care network, and the public health aspects of CMH services have important relationships with general health.

Public Health and Preventative Programs

Mental health promotion and prevention of mental disorders are interlinked as the former builds resilience and hence reduces risk of developing disorder. Mental health is an essential component in enabling individuals to fulfill their potential. The Millennium Development Goals (MDG) do not address mental health directly, but addressing child and adolescent mental health needs can assist in achieving them. Patel, Flisher, Nikapota, and Malhotra (2008) explore the links between MDGs and child and adolescent mental health. They highlight how childhood emotional and learning disorders contribute to school dropout, as shown by studies from South Africa, India, and Brazil. Ensuring universal primary education is a key MDG as it gives children the chance to build a better life for themselves and combat the intergenerational cycle of poverty. A number of primary prevention programs have been successfully implemented in high-income countries (Flament et al., 2007).

Key to promoting children's mental health is attention to the earliest period of development. Programs that start early, that is, during the prenatal period, and continue through infancy into early childhood, with continuity of care, have been seen to produce maximum benefit (Engle et al., 2007).

In developing countries, programs that are multipronged, addressing physical and mental development, as well as supporting parents in parenting skills, have shown significant benefit. Alderman and King (2006) reviewed three integrated programs. The first of these, the Jamaica Early Child Development (ECD) Study, divided children into four random groups, those who had nutritional supplements only, those who received stimulation in the form of play sessions, a group which combined both nutrients and stimulation and a control group. They found that both supplements and stimulation had positive effects but the interventions were significantly more effective when combined and helped children to develop their full potential. Bolivia's integrated child development showed significant gains in cognitive and psychosocial outcomes when children were exposed to the program early in life and for longer than a year. A pilot ECD program in the Philippines, combining a center-based and home visiting approach, found significant improvements in growth, cognitive, social, and motor development.

Other programs have aimed to enhance mother–infant interaction, critical for ECD. Cooper and colleagues (2009) describe the impact of an intervention delivered by lay community workers in a rural community in South Africa. Toward the end of pregnancy and for six months postpartum, they visited mothers to provide support and guidance in parenting. This was shown to significantly increase the sensitivity of mothers toward their infants and infant attachment to mothers.

Poor maternal mental health is a critical risk factor for child development (Rahman, 2007). Rahman, Malik, Sikander, Roberts, and Creed (2008) carried out a cluster randomized trial to assess the efficacy of an intervention delivered by community health workers to reduce depression in rural Pakistani women. The health workers used a structured intervention based on principles of cognitive behavioral therapy and visited mothers once a week in the last four weeks of pregnancy, three times in the first month postpartum and once a month in the following nine months. This intervention was shown to reduce depression by 50% in the intervention group as compared to the control group. The intervention had a significant impact on child health outcomes, including reduced diarrhea, increased rates of immunization, improved uptake of contraception by the mother following birth, and an increased time spent by both parents playing with the infant. Previously the same researchers had highlighted the negative effects of maternal depression on infant growth (Rahman, Iqbal, Bunn, Lovel, & Harrington, 2004).

Support for parenting through parenting programs also has the potential to positively influence children's well-being, with a strong evidence base particularly for behavior management in oppositional defiant and conduct disorders, but also more generally in promoting their emotional and social development (Brown, 2008).

Evidence of cost-effectiveness is crucial in determining whether a prevention program is likely to be adopted. The best evidence from economic evaluations is for early childhood development programs (Zechmeister, Kilian, McDaid, & MHEEN Group, 2008). Investment in the early years is cost-effective—the Return on Investment studies indicate almost a sevenfold return for each dollar invested in early childhood programs (Britto, Ulkuer, & Meyers, 2009). The largest benefits are seen in the most vulnerable children as they show improved educational outcomes.

Community and Primary Health Care Models

In addition to promotive and preventive programs, early identification of difficulties and appropriate management is crucial to a comprehensive CMH service. CMH services in high-income countries have moved from institutional care to child guidance or outpatient clinics and progressively to more community-based services (Fombonne, 2005). Government policy in these countries has moved toward developing the role of primary care in future development of child and adolescent mental health services.

In the United States, the American Academy of Pediatrics Task Force on Mental Health and the American Academy of Child and Adolescent Psychiatrists Committee on Health Care Access and Economics recommend further developing the role of primary care in providing care for children with developmental emotional and behavioral problems and common mental health disorders (American Academy of Pediatrics Task Force on Mental Health, 2009). The emphasis is on care being easily accessible and acceptable, delivered in settings that are nonstigmatizing. In the United Kingdom, Bowers and colleagues carried out a systematic review of the effectiveness of interventions in primary care, both delivery of interventions in that setting and delivery through involvement of primary care staff (Bower, Garralda, Kramer, Harrington, & Sibbald, 2001). They found some evidence that specialist practitioners working in primary care settings obtained good outcomes and also found evidence for educational interventions improving the knowledge and skills of primary care workers in relation to CMH. However, there was a lack of robust evidence supported by randomized control trials.

In low- and middle-income countries, the primary care health system is optimally placed to address the needs of mothers and children. Regular monitoring and screening can identify women at risk of physical ill health, nutritional deficiencies, depression, or substance misuse and provide appropriate intervention. Similarly, developmental checks of infants and young children will enable early identification of those who are vulnerable (Petersen, Bhana, Flisher, Swartz, & Richter, 2010). However, a number of barriers need to be addressed in this process (Sayal, 2006). These include (1) parental perception of problems which limits help seeking, (2) the evidence that when parents do seek help, they usually present with physical problems, (3) underrecognition in primary care with studies showing that fewer than half with mental health problems are recognized, and (4) among recognized children, less than half are referred to specialist services. Supporting primary care professionals in the detection of disorders and in providing evidence-based interventions within primary care settings would potentially benefit many more children than are currently able to be seen within specialist services.

Attempts have been made to provide community- and primary care–based services in LAMI countries. Brazil, Egypt, Israel, and Lebanon implemented and evaluated a comprehensive community-based program with a package of intervention aimed to offer health care providers and others working in CMH a flexible intervention that could be adapted to different countries and localities based on (1) the amount of health care and school resources that are available, (2) the nature and severity of the types of problems children have, and (3) the preferences and cultural factors that are important within communities. The feedback received from these sites indicated that the interventions were useful in helping children with internalizing and externalizing problems (Bauermeister, So, Jensen, Krispin, & Seif El Din, 2006).

Another example of successful integration is provided by De Silva, Nikapota, and Vidyasagara (1988) in Sri Lanka. They began by collecting data to demonstrate the presence of treatable CMH problems in the community. This was used to convince health planners to include CMH in the agenda of primary health care. A multidisciplinary workshop consisting of professionals from the health, social, and education sectors formulated a national policy for CMH and formed a core group on child mental health, whose function was to implement and monitor service development. Teachers, childcare workers, and all grades of primary care staff were trained, using manuals developed by the WHO. Defined tasks relating to the promotion of healthy development and identification of children with mental health problems were introduced into primary care services. This program was well received by policy makers and planners and became an integral part of the child health services. Similar approaches have been attempted at local levels, for example, in the early 1980s, the Department of Child and Family Psychiatry at King Edward Medical University in Lahore carried out an epidemiological survey of childhood disability following which they developed an outreach program in collaboration with a local nongovernmental organization (NGO) to provide services to identified children delivered by the departmental psychologists and community workers (Tareen, 2004).

Another primary care model of CMH service has been described by De Jong (1996) in Guinea-Bissau. This included two-stage screening of 100 consecutive children attending primary health care (PHC) facilities in an urban and rural area, which identified 13% with neuropsychiatric disturbances. The assessment of the primary care workers' knowledge of mental health revealed that it was very poor. Epilepsy, acute psychosis, depression, psychiatric emergencies, and functional complaints were selected as priority disorders for intervention, based on criteria of point prevalence, community concern, seriousness, susceptibility to management, sustainability of the program, and the knowledge and skills of PHC workers. Following training and supervision of 850 PHC workers, their diagnostic sensitivity for priority disorders increased from 31% to 85%, and 82% of the patients received appropriate treatment. These improvements were most marked for epilepsy: diagnostic sensitivity increased from 0% to 95%, 90% received correct treatment, and seizure frequency dropped from 16 to 0.34 a month. More than half the patients regained reasonable or full functional capacity.

Pillay and Lockhat (1997) describe the development of a community outreach service in South Africa, with clinical psychologists visiting on a monthly basis to support primary care personnel in peripheral areas, in managing child and adolescent mental health problems.

School-Based Mental Health Programs

Universal education is firmly on the agenda of LAMI countries by virtue of its identification as a key factor in supporting the development of nations. Hence schools are the next major potential positive influence in promoting children's mental health.

School-based interventions have been shown to be effective in prevention of drug and alcohol abuse (Flament et al., 2007). These have mainly been tested in high-income countries. Studies from LAMI countries have described how mental health information aimed at school children can help to increase knowledge and understanding of mental health issues, not only in the children themselves, but also in the families and neighbors (Rahman et al., 1998). Although not specifically addressed by the authors of the study, such programs could help to reduce stigma of mental disorders by increasing understanding and awareness.

Other types of programs targeting schools have been described in developing countries, including screening programs for mental health. Eapen and colleagues (1999) describe the incorporation of a mental health screening of school going children in a district in the United Arab Emirates, by utilizing the existing structure of screening children every three years for physical health problems, through a school health center. They used the Reporting Questionnaire for Children (RQC), which has been used in previous studies in developing countries and has a high sensitivity. Children who scored positive were then assessed by a child psychiatrist. The authors described how a proportion would be managed by school professionals liaising with specialists and a proportion would need referral to a specialist setting. A similar model is employed by the School Mental Health Clinic in Bombay, increasing mental health awareness in teachers and other professionals and assisting them to deal with the most common mental problems in children (Vaidya & Dhavale, 2000). Whitman, Aldinger, Zhang, and Magner (2008) describe the rolling out of a program of Health Promoting Schools to 51 schools in Zhejiang Province in China. Some of the difficulties encountered in this process are described, including the need to use data to plan and inform interventions as well as the need to have a bottom-up approach, with school staff leading the process and having a good understanding of psychological health and the knowledge and skills to support its development. Nastasi, Varjas, Sarkar, and Jayasena (1998) describe their experience of initial steps toward developing a school-based mental health service in Sri Lanka using a participatory model to identify individual and cultural factors relevant to mental health in the local population.

In summary, most children attend school at some time during their lives. Schools can have a profound influence on children, their families, and the community. School-based mental health services also have the potential for bridging the gap between need and utilization by reaching disadvantaged children who would otherwise not have access to these services and could provide an ideal environment in which programs for CMH can be integrated in a cost-effective culturally acceptable and nonstigmatizing manner.

Partnerships with Voluntary Sectors

Agencies in the voluntary sector have traditionally played a significant role in raising awareness of the issues faced by children with mental health difficulties and their families and also in reducing stigma. Many agencies provide information for families to enable them to understand and support their children. Direct provision of services to children as well as family support services is a crucial component, particularly in low resource settings, where services in the state sector are insufficient to meet local needs. Many have also been involved in producing training manuals in the local languages to make information readily available and culturally appropriate. For example, the Protibhondi Foundation in Bangladesh has produced a pictorial version of the *Portage Guide* to use with families with low literacy (see http://bangladeshprotibondhifoundation.org/). In India, there are a number of voluntary sector organizations running mental health programs for children and adolescents (Patel & Thara, 2003). In Nigeria, Omigbodun (2008) describes a partnership between a faith-based organization and CMH professionals catering to the spiritual and mental health needs of children in an institution for young offenders and abandoned children in southwest Nigeria, highlighting both the opportunities and potential conflicts that such partnerships can bring.

BUILDING CAPACITY TO SUPPORT CMH SERVICES

Given the scarcity of CMH professionals in the LAMI countries, building capacity of existing staff becomes an important issue, especially in countries where there are no trainers to help build the capacity. In the long term, efforts should be made to include CMH training in the curricula of undergraduate medical students and other health workers. Postgraduate psychiatric courses may also need to be revised to include CMH. The curricula should reflect the integrated nature of child health services by having input from psychiatry, psychology, pediatrics, women's health, social sciences, and public health.

The knowledge base and expertise established in high-income countries can contribute to build capacity in LAMI countries. Distance learning can offer a feasible and sustainable method for this purpose. Telemedicine has been used as an effective tool for service development in areas with poor coverage in high-income countries (Wootton, 2003). For example, the E-Child and Youth Mental Health Service, providing children and adolescents in remote areas of Queensland with access to specialist mental health consultations by using telemedicine resulted in improvement in the capacity of the local mental health professionals to deliver more appropriate and specialist services for children and adolescents (Ryan, Stathis, Smith, Best, & Wootton, 2005).

In developing countries, initiatives using telepsychiatry have also been described. In adult psychiatry, the Schizophrenia Research Foundation

(SCARF) at Chennai in south India, have described their experience in establishing and running a telepsychiatry network through cooperation between the Indian Space Research Organization (ISRO), Oxfam India, a local NGO SAATHI and private sector organizations. They describe the importance of having a suitable location with peripheral telepsychiatry centers and liaison with local NGOs that are provided with training to enable the identification of mental health problems in the community and then bring patients to the local centers, while the psychiatrist in the Chennai office advises on management. The authors highlight the importance of ensuring good clinical and case documentation and accountability (Thara, John, & Rao, 2008).

In the area of child and adolescent mental health, Rahman, Nizami, Minhas, Niazi, and Munir (2006) describe use of the Internet to provide training and supervision to mental health professionals working in Rawalpindi, Pakistan, through collaboration with the Department of Child and Adolescent Psychiatry at the University of Manchester in the United Kingdom. Their aim was to train and empower existing staff. Evaluations carried out after 12 months indicated that the diagnostic and management skills of mental health professionals in Rawalpindi improved after the distance supervision.

So and colleagues (2006) have demonstrated the use of a distance training/supervision model to disseminate evidence-based assessment and intervention approaches for children and adolescents with behavioral and/or emotional problems at different sites in Brazil, Egypt, Israel, and Lebanon. They describe specific challenges encountered in this process and solutions used for overcoming the obstacles.

CONCLUSIONS

There are numerous challenges and difficulties in setting up comprehensive services for children and adolescents with mental health problems in LAMI countries. However, there are also opportunities. Prevention and promotion programs can target reversible risk factors such as malnutrition, infection, and lack of early stimulation. Relatively well-developed PHC and school systems provide the opportunity for integration of programs for CMH within these systems. Training and supervision for such programs can be provided from a distance using modern telecommunication methods such as the Internet. Community involvement through nongovernmental and community organizations can assist statutory agencies in many aspects of their work. The majority of the world's population consists of youth living in low-income countries. Investment in their mental health should be a global priority.

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Chapter 3

YOUNG CHILDREN AND HIV IN SUB-SAHARAN AFRICA: IMPLICATIONS FOR PRACTICE AND INTERVENTION

Tamsen Jean Rochat and Carol Mitchell

The early years of a child's life are critical. Over the last few decades science has significantly enhanced what we know about the needs of infants, toddlers, and young children, underscoring the fact that experiences and relationships in the earlier years of life make a critical contribution to a child's ability to grow up healthy, ready to learn, and able to fulfill their human potential.

Key aspects of children's physical, cognitive, emotional, social, and spiritual development occur in these earlier years of life. Infant mental health is strongly influenced by relationships, context, and environment and can provide a sturdy platform for later healthy development. Development takes place at a rapid rate but is easily disrupted if a child's fundamental needs are not met, and in particular, if risks are cumulative. Fundamental needs include nutritious food and safe shelter; human interactions that nurture mental and emotional development; and health care for protection from childhood illnesses.

Infancy and early childhood provide a series of "once in a lifetime" developmental opportunities for young children to assimilate a multitude of learning across a diverse set of modalities. These include physical growth and survival, the psychological development of language, cognition, social and emotional competencies, and the integration of the beginnings of complex systems of moral reasoning, decision making, and spirituality in preparation for the transition into a healthy and resilient adolescence, and later, a successful adulthood.

A cornerstone of this ability to grow and thrive is children's need for a loving, stable, and consistent caregiver who plays a role in fulfilling critical developmental functions in their cognitive, neurological, language and socioemotional development (Richter, 2004).

Supporting the healthy development of all children requires the translation of our knowledge of what is essential for healthy development into effective, evidence-based policies and practices. While there is well established knowledge of what children need, we are often confronted with challenges in efforts to ensure safe and healthy childhoods as a right of all children. Children live in diverse contexts—many of which present complex and at times completely unexpected challenges to safeguarding what children need.

Children are living in increasingly threatening times. The last decade has seen millions of children affected by the direct and indirect perils of poverty; war and terrorism; natural disasters such as earthquakes, droughts, floods, tsunamis, and tornados; and the ongoing threats of preventable diseases such as malaria and HIV and AIDS. Rapidly escalating in contexts of profound poverty, HIV and AIDS is one of the biggest challenges facing children in the developing world today. For children living in Africa—and in particular sub-Saharan Africa where infection rates are highest—the effects of HIV and AIDS on children's lives are significant, persistent, and steadily increasing. In the context of such a significant threat, coupled with such a desperate lack of resources, there is a need to develop coordinated systems of services for children that allow support for the whole child—physically, socially, emotionally, spiritually, and cognitively—within the context of the family, the home, community, and health care settings (Richter, Sherr, et al., 2009).

This chapter explores the psychological and developmental challenges faced by young children living in sub-Saharan African, an area heavily affected by HIV and AIDS. We examine the scale of the threat of HIV and AIDS to children's survival, their care systems, their development, psychological well-being and their mental health. We examine the literature for guidelines and approaches to defining and measuring the impact of HIV and AIDS on children and the current responses to the threat of HIV and AIDS. In understanding how HIV and AIDS impacts on younger children—either through their own HIV infection—or through the HIV infection of their care providers and care giving systems—the threats presented by HIV and AIDS to infant mental health and to young children's healthy physical and psychological development are presented. A child rights framework is used to make recommendations for the discipline and practice of child psychology. Finally, opportunities for the promotion of infant mental health, including prevention and intervention activities to address the impact of HIV and AIDS on young children and their families are presented.

THE HIV AND AIDS EPIDEMIC IN SUB-SAHARAN AFRICA

The magnitude of the HIV and AIDS epidemic confounds the imagination with children exposed to wide-ranging vulnerability and adversity. The UNAIDS global report on the AIDS epidemic (2009) estimates that 34 million people worldwide were living with HIV in 2008; of those 15.7 million were women and 2.1 million children under 15 years of age. In 2008 there were an estimated 430,000 new infections of HIV among children less than 15 years old and approximately 280,000 children in this age group died from AIDS related deaths in the same year.

In sub-Saharan Africa, where over 80% of all HIV and AIDS deaths occur and where over two thirds of new infections originate, HIV and AIDS is a disease of the poor and the disempowered. Unlike developed countries, in Africa, the HIV epidemic is generalized across the socioeconomic spectrum and is also predominantly a heterosexual disease—affecting couples, parents, and families (Filteau, 2009). As a result children are one of the most heavily affected and exposed population groups (Earls, Raviola, & Carlson, 2008). Most children infected with HIV are infected through vertical transmission and, given that HIV prevalence rates among pregnant women are as high as 37.7% in heavily affected areas (Rice et al., 2007), hundreds of thousands of children are put at risk annually, either through infection by vertical transmission or by virtue of being born to a parent with a chronic and terminal illness.

The impact of HIV appears to be unrelenting. The total number of people living with HIV in 2008 was 20% higher than it was in 2000 and prevalence was approximately three times higher than it was two decades ago in 1990 (UNAIDS, 2009). Some evidence is emerging that prevention efforts are beginning to work in some African countries including Tanzania and to a lesser degree Zambia. Given increased advocacy, attention, and research on issues of vertical transmission and the impact of the epidemic on children in recent years, services to prevent mother to child transmission have increased from 10% to 40% globally and for the first time there was a drop in new infections among children in 2008 (UNAIDS, 2009), suggesting that these efforts are saving lives. Likewise antiretroviral coverage rose to 48% in eastern and southern Africa. Despite this progress, the daily lives of countless children will still be threatened by HIV over the coming decade while issues of resources, poverty, and equity in access to both prevention and treatment services are addressed (Coovadia, 2009). The threat of HIV and AIDS to healthy childhoods for young African children is very real, current, and unfortunately vast.

DEFINING AND MEASURING THE IMPACT OF HIV AND AIDS ON CHILDREN

While HIV and AIDS impacts on children through numerous pathways, historically it has been most commonly quantified in terms of rates of primary HIV infection in children or through the estimation of the effects of orphaning as a result of HIV and AIDS related deaths. Increasingly the literature (Meintjes & Geise, 2006) has drawn attention to the limitations of an orphan focused approach to understanding the effects of HIV and AIDS on children's lives and to the unfortunate implications this has had on both the attention being given to, and the resources allocated to prevention and treatment within families.

The limitations of the "AIDS orphan" approach to understanding the impact of the epidemic are outlined in the following section, and an alternative approach that focuses on the familial context within which HIV and AIDS threatens children is presented. This approach provides for the analysis of three levels of impact on young children: either through infection, exposure, or being affected over the course of the family life cycle.

Historical Approaches: Orphaning and the Impact of HIV and AIDS

In a systematic review Sherr, Varrall, et al. (2009) examined the definition and use of the concept "AIDS orphan" to determine the implications of the use of this terminology as a means to quantifying the extent of the HIV epidemic. While acknowledging that broader and evolving definitions have intended to be inclusive of children in need of care and support, the review warns that the lack of use of a consistent and concise terminology—be it for those considered "orphaned" (whether that is single, double, maternal or paternal orphaned) or those considered "vulnerable"—has resulted in poor and inconsistent descriptions of case and control children in most research studies, making much of the published evidence base on the impact of HIV on children difficult to examine and compare.

Despite this, in general, children who are orphaned appear to have detrimental outcomes. Some studies do however present a mixed picture and further research is needed to understand the protective factors (e.g., having one parental figure still alive; or the impact of rallied extensive care following double orphaning) by which some groups of orphans do not show such detrimental effects. Very few studies examine resilience and protective factors which may offer a clearer understanding of the complex mechanisms by which some children flourish and some flounder in the face of adversity brought about by HIV and AIDS. Recent studies have improved on descriptions and have begun to elucidate interesting gendered effects (Sherr, Mueller, & Varrall, 2009) although these are not understood well enough to guide responses in highly affected areas.

Outside the context of HIV and AIDS considerable research from many parts of the world has examined maladaptive behaviors resulting from high exposures to risk situations (Rutter & the ERA study team, 1998). Studies of depression and anxiety in children exposed to death, trauma, natural disasters, or conflict are fairly prolific in the literature. Likewise the examination of resilience is valuable in guiding prevention and intervention programming aimed at improving children's lives.

The promotion of child mental health requires that children are viewed from their perspective in the social context in which they are developing, and for the majority of children in sub-Saharan Africa, this is still the family. Defining the effect of HIV and AIDS only through "orphaning" processes or events not only limits our perspective to one of deficits and maladaptive behaviors rather than one of resilience, but restricts our understanding of the complex nature of HIV's impact on the family.

Current Approaches: HIV- and AIDS-Affected Families

In order to fully understand and respond to the needs of children it is critical to reflect on what is known about the contexts in which sub-Saharan African children are being raised—especially given the impact of HIV and AIDS. The Joint Learning Initiative on Children and HIV/AIDS (JLICA) report (Irwin, Adams, & Winter, 2009) represents the most in-depth examination of the effects of HIV and AIDS on children to date, and included over 50 systematic reviews and independent analyses exploring areas of strengthening and understanding families, community action, access to services and human rights, social and economic policies. The findings are broader than the scope of this chapter but five important learnings are relevant to how we approach and respond to the effects of HIV and AIDS.

First, the scope and severity of the impact on children is worsening and increased numbers of children are infected and dying from HIV; increased numbers of children are exposed to adult HIV illness and the care burden of HIV in households; and increased parental loss (Richter, Sherr, et al., 2009). Second, children of HIV-positive parents experience needs well before their parents die and existing definitions of "orphans" should be viewed with caution as they result in misdirected responses (using narrow interventions to target children as individuals and only at specific time points) thus missing prevention opportunities and the opportunity to support families and communities best positioned to care for children (Sherr, Varrall, et al., 2009).Third, the evidence on orphaning is beleaguered with inaccuracies given findings that some 88% of children designated as "orphans" by international agencies actually have a surviving parent and approximately 95% of all children directly affected by HIV and AIDS, including those who have lost parents, continue to live with their extended families (Hosegood, 2009). Fourth, orphaning implies that children are without any family systems of care when this is not true and rather than directing attention to strengthening families it directs attention away from families. Lastly, evidence suggests that supporting families could mitigate much of the effect of HIV and AIDS on children (Desmond, 2009).

This evidence has implications for what we understand to be the context in which children (HIV infected, exposed, and affected) find themselves and how we frame what assistance is required, and the mechanisms by which it is best delivered. To intervene effectively toward improved mental health outcomes in children facing the threat of HIV and AIDS we need to look toward the places that children most commonly live and grow, and that place, according to current evidence, and despite the impact of HIV and AIDS, remains the family context.

This alternative approach to contextualizing the effect of HIV and AIDS enables an understanding of the different levels of impact which occur or reoccur at different stages in the HIV-affected family life cycle. The following section will describe each of these points on this continuum in more detail.

HIV-Infected Children

Children infected with HIV are the most clearly defined and quantifiable group. As described by Coovadia (2009) in resource poor settings children may become infected with HIV through a process of vertical transmission from mother to child at any one of three time points:

1. in utero during pregnancy, in particular when a mother has advanced HIV illness, high HIV viral load, or is not receiving HAART (highly active antiretroviral treatment) treatment
2. during the birth process, in particular if there is a prolonged delivery, ruptured membranes, and/or exposure to infected blood, or if the mother is unaware of her HIV status and fails to use preventive treatment

3. during breast-feeding, which exposes children directly to HIV through ingested breast milk, in particular if the child continues to breast-feed after six months postnatal; if she practices mixed feeding as opposed to exclusive breast-feeding, which is known to reduce the risk of infection; or if she is breast-feeding while experiencing untreated breast health problems

Children who are not infected directly through vertical transmission may become infected through exposure to HIV in childhood. As described by Richter, Chandan, and Rochat (2009) in sub-Saharan contexts, these include the following:

1. exposure from a failure of universal protections in public health facilities (e.g., through needle stick injuries or blood transfusions)
2. through injuries in the home or community that result in exposure to HIV-infected blood
3. through exposure to contaminated fluids during the unprotected caretaking of HIV-infected ill adults living in the household
4. through sexual abuse and assault of children

Sadly in sub-Saharan Africa children are frequently put at risk of HIV through high incidences of child sexual abuse and assault.

HIV-Exposed Children

The majority (70%–80%) of children born to HIV-positive mothers escape vertical transmission if preventative measures are in place. As described by Filteau (2009) these children may be HIV-negative but they have been exposed to HIV through direct exposure to the HI virus (in utero, during delivery, or during breast-feeding), which, while it has not resulted in HIV infection, may still have other direct and indirect consequences, including the following:

1. increased health risks and risk of mortality, morbidity, and slower growth most likely as a result of less exposure to healthy breast milk as mothers are either unable to breast-feed or stop breast-feeding early in order to protect the child from HIV infection
2. less access to vaccinations for the prevention of childhood illness and greater exposure to infections as a result of cumulative factors including the HIV-positive status of their mothers
3. greater exposures to parental illness and death
4. the impacts of exposure to antiretroviral drugs either in utero or during breast-feeding and other immune abnormalities

Furthermore, given that their primary caregivers are HIV infected, they may also be directly exposed to the impact of maternal illness and poor mental health (Stein et al., 2005).

HIV-Affected Children

Children affected by HIV and AIDS are a much broader group who are less easy to define as the impact is experienced through indirect mechanisms and processes related to HIV and AIDS. As described by Richter, Foster, and Sherr (2006) and Rochat, Richter, and Shisana (2008) they may be more indirectly affected by the following:

1. Children may have one or many of their immediate family members or caregivers (fathers, siblings, grandparents, aunts or uncles) who are HIV infected.
2. They and their immediate caregivers may be HIV-negative but they may be affected by HIV because other immediate family members, neighbors, and close family friends may be HIV infected, thus increasing their exposure to illness and loss.
3. Children may be impacted when families are reconstituted as a result of HIV and AIDS following illness and death, which may include unexpected migration or the fostering of extended families' children from a directly affected family.
4. Children may live in communities or social systems heavily impacted by HIV (where teachers or nurses are HIV-positive) and thus are affected by increased social viral load and the consequent changes in their social environment and access to services.

Viewing children as family-bound subjects and placing children along such a continuum from infected to exposed to affected helps to more clearly define the particular impacts that HIV may bring and the relevance for both prevention and intervention. This chapter includes an examination of the impact of HIV on all these groups of children, with a special focus on younger children.

HIV AND AIDS: PHYSICAL AND PSYCHOLOGICAL CHILD OUTCOMES

In an examination of studies on the impact of HIV on children, Sherr, Varrall, et al. (2009) offer a comprehensive and detailed review of 188 (57 empirical and 131 nonempirical) studies and suggest two useful categories summarizing this field of research: physical (where

34 outcomes were summarized into five thematic areas) and psychological impacts (where 74 concepts were clustered into nine prominent themes).

Shortcomings in Evidence on Child Outcomes and HIV and AIDS

There is evidence in the literature on orphaned and vulnerable children that HIV and AIDS has both physical and psychological impacts for children. Whether this is a direct impact (through infection) or indirect (through being exposed or affected), children and families need support to mitigate the effects of HIV and AIDS. However the evidence available to guide programmatic intervention has specific shortcomings which need to be addressed.

Definitions, Descriptions, Measures, and Comparability

As described by both Earls et al. (2008) and Sherr, Varrall, et al. (2009) there are several shortcomings in the current literature:

1. The children being assessed and compared on child outcomes are often poorly and inconsistently described (as single, double, maternal, paternal orphans or vulnerable).
2. Empirical studies seeking to demonstrate difference are often limited by the ecology of context in that control group children are often as badly off (as a result of poverty and other cumulative risks) as case group children and that case group children often receive extensive support as a result of research participation.
3. Sample sizes are often small and unequal and limited by contextual and ethical considerations.
4. Many studies rely on self-report measures from caregivers and those that do measure children's experiences directly from children themselves have found differences in outcomes reported by children versus caregivers.
5. The diversity in measures used across studies to measure child outcomes makes comparisons and generalizations difficult.

Given these limitations and that recent studies have produced surprising and unexpected results, we still have a way to go before we fully understand the complexity of the impact of HIV and AIDS on children.

RESEARCH RELEVANT TO INFANCY AND EARLY CHILDHOOD

The alarming dearth of evidence regarding younger children is concerning. The majority of the existing literature focuses on children of school age and early adolescence and is thus naturally more orientated to addressing and understanding children in middle childhood, by which time many opportunities for prevention and mental health promotion have already been lost. That which does exist is often limited by small samples and inconsistent results.

As pointed out in reviews by both Earls et al. (2008) and Sherr, Mueller, et al. (2009) despite knowledge that the majority of children are infected via vertical transmission and that 90% of infected children are living in sub-Saharan Africa, very few studies on HIV-infected younger children were found in this region. Table 3.1, originally presented by Rochat, Mitchell, and Richter (2008) and updated with recent literature, offers a summary of African research on children and HIV, with particular reference to child developmental outcomes and demonstrates the limitations in both the scale and quantity of research on the continent.

Van Rie, Harrington, Dow, and Robertson (2007) also demonstrate that there are few studies focused on HIV and the majority of these focused on children ages six years and upward. Most studies of vertical transmission in the region cease follow-up at age one or two years and focus on general biomedical markers of transmission, morbidity and mortality, significantly less examine psychological and social developmental issues.

In contrast to the lack of literature around HIV and AIDS and young children, extensive international research has been conducted (particularly in the United States) on the impact of adversity caused by poverty and other risk factors in infancy and early childhood. Evidence attests to the detrimental effects of malnutrition, neglect and low income contexts and the cumulative risks they bring to bear on children. In a similar vein there is sufficient evidence to suggest that the earlier in childhood the intervention the greater the positive impact will be on child outcomes and the greater the cost effectiveness. This literature may provide useful insights in developing strategies which mitigate the effects of HIV and AIDS on young children in sub-Saharan Africa. As argued by Chandan and Richter (2009) in a review of early child development interventions and their applicability to HIV epidemic areas, one of the most well evidenced models for strengthening families lies in nurse- and lay professional–based home visiting programs and community-based support programs for early child development.

Table 3.1
Summary of 14 studies undertaken in Africa on HIV and child development

Study	*Place*	*Sample*	*Measures*	*Findings for HIV+*
Boivin et al. (1995)	Zaire	14 HIV+ 16 controls	Denver Developmental Screening Test	Motor and visual-spatial deficits. Maternal infection undermines cognitive development in children.
Bell et al. (1997)	Cote d'Ivoire	76 HIV+ 77 HIV–	Various	Comparatively early death in HIV-infected children in Africa compared to West.
Drotar et al. (1997)	Uganda	436 (79 HIV+) 12–24 months	Developmental scales (various)	HIV showed a detrimental effect.
Bobat et al. (2001)	South Africa	48 HIV+ 93 HIV–	Physical measures	HIV+ children lowered length for age.
Kotras (2001)	South Africa	74 HIV+	Revised Griffiths Scales of Mental Development	Below average performance, developmental delays on variable subscales.
Miller et al. (2001)	South Africa	92 HIV+ 439 HIV–	Clinical assessment	HIV+: failure to thrive and growth abnormalities.
Potterton and Eales (2001)	South Africa	HIV + infants >1 year	Not available	Developmental delay in 40% of HIV+ infants.
Sandison (2005)	South Africa	HIV+ children	Developmental profiles	Delayed milestones.
Bagenda et al. (2006)	Uganda	107 children 6–12 years	(WRAT-3) growth and sensory assessments	Mixed results.
Kauchali and Davidson (2006)	sub-Saharan Africa	HIV+ (infants)	Various	Neurodevelopmental delay is prevalent in HIV+ children.
Du Toit and Van der Merwe (2006)	South Africa	18 HIV+ 10 HIV–	Various	Delayed milestones, perceptual-motor delays; poor self-esteem.

(Continued)

Table 3.1
Summary of 14 studies undertaken in Africa on HIV and child development (*Continued*)

Study	*Place*	*Sample*	*Measures*	*Findings for HIV+*
McGrath et al. (2006)	Tanzania	327 HIV-exposed children	The Bayley Scales of Infant Development	Psychomotor developmental delays.
Wilmshurst et al. (2006)	South Africa	7 HIV+	Case studies, neuroimaging	Severe, progressive neuropathology.
Popich et al. (2007)	South Africa	HIV+ (infants)	Linguistic assessment	Communication disorders and language delays.
Potterton et al. (2009)	South Africa	122 HIV+ infants <2.5	Bayley Scales of Infant Development	Wasting, stunting, severe delays in cognitive and motor development.
Van Rie et al. (2009)	Democratic Republic of Congo	35 HIV+; 35 HIV– 90 controls 18–71 months	Bayley Scales of Infant Development	HIV-infected children accelerated motor development; similar gains in cognitive development. Younger children; early presenters accelerated and greater gains in development.

Source: Updated from Rochat, Mitchell, and Richter (2008, p. 63).

THE RELATIONAL CONTEXT OF THE EARLY YEARS

Infant development and mental health can be affected by factors associated with poverty, malnutrition, and childhood disease (Richter, 2004). However, even when facing adversity some infants develop adequately. One of the key facilitators of these early childhood developmental processes is responsiveness by a consistent and responsive caregiver. As Krebs, Rochat, and Stein (2003) outline, there are a number of specific ways in which early care giving experiences can influence childhood development, and in which a lack of caregiver responsiveness is detrimental to the process of development.

First, caregiver responsiveness facilitates learning; the child is able to learn through observing their caregivers' consistent responses to certain cues and by developing learned associations between stimuli and responses within their environment. Second, caregivers facilitate the development of sustained attention. Sensitive caregivers watch their children closely and follow a child's cues, changing activities when the child's attention is failing; in this way sustained attention is taught. Third, children also need to learn an awareness of a caregiver's attention and to follow the direction of an adult's attention or pointing; this is known as joint attention (Butterworth, as cited in Stein et al., 2009). Joint attention is important to ensure that regulation of attention and affect occurs, and the child learns from the caregiver's affective responses to other people and objects in a process which is called social referencing. In addition to this, joint attention also provides a framework for language acquisition (Stein et al., 2009). Lastly, a key role of caregiver responsiveness is regulating the child's emotional state and this is achieved through the caregiver responding appropriately to the child's cues of distress and pleasure (Richter, 2004). This capacity for emotional regulation is important in the development of interpersonal relationships, integrating into society and managing the demands of many of our daily experiences, for example, learning in school (Stein et al., 2009).

CAREGIVER MENTAL HEALTH AND QUALITY OF CARE

A mother's capacity to be available and responsive to her infants is strongly influenced by her mental health. Maternal depression is known to be high in contexts of HIV and AIDS (Rochat et al., 2006). Maternal depression is known to adversely affect healthy mother–child interactions, and women who are poor or suffering chronic or terminal illnesses are more likely to report depressive symptoms. There is a general consensus that caregiver depression during the early years of children's lives has long-term effects on their development and requires specific and urgent attention (Stein et al., 2005).

YOUNG CHILDREN INFECTED, EXPOSED, OR AFFECTED BY HIV AND AIDS

In examining the challenges facing infected, exposed, and affected young children we present what sub-Saharan African research exists, and where appropriate make reference to international research to guide our understanding of young children's needs and experiences and to opportunities for the promotion of mental health among these children. Preventative practices and recommendations are offered by topic.

The HIV-Infected Young Child

HIV disease impacts on the young child through a complex interaction of biological, psychological, social, socioeconomic and environmental mechanisms. The vast majority children under the age of five years who are infected with HIV become infected through vertical transmission and are the focus of this section.

The Diagnosis of HIV

Whether following the failure of prevention of mother to child transmission or during a period of illness and hospitalization in early infancy or childhood, learning one's child's or one's own HIV diagnosis is never easy. In qualitative research involving HIV-infected children under the age of five in South Africa, Rochat, Mitchell, et al. (2008) show that the failure of prevention of mother to child transmission represents a distressing and difficult experience for new mothers resulting in shame, guilt, fear and a lowered sense of self-efficacy. Lazarus, Struthers, and Violari (2009) (also in South Africa) support this and add that the distress of learning the child's status after failed prevention efforts can interfere with mother's capacity to absorb and respond to new and complex information regarding the care of her newly HIV-infected infant.

These two qualitative research studies articulate the psychological challenges involved in adjusting to maternal HIV infection, both during pregnancy and in the early postnatal period. A perception of "a failed motherhood" is common and the HIV infection of the child represents a tremendous loss of hope for mothers. In international literature the social and psychological stresses surrounding diagnosis and disclosure are the most dominant concerns raised by all caregivers living with an HIV-infected child.

An important factor for parents in coping with a diagnosis of HIV in children relates to the timing of the HIV test. Varga, Sherman, Maphosa, and Jones (2005) demonstrated that most mothers preferred receiving an early HIV diagnosis (at 4 months rather than 12) for their child because this meant they did not have to deal with the uncertainty and fear of an unknown diagnosis. In contrast, Lazarus et al. (2009), whose participants had access to PCR (polymerase chain reaction) testing at six weeks, elucidate the difficult issues in engaging with testing, especially given that it requires that one will learn and have to accept the HIV result. For many mothers in their study delaying testing represented retaining hope.

Recommendations for Child Psychology Practice

Counseling and support that aim to shift the focus from parental failure to increased self-efficacy are important in interventions for parents, particularly mothers, following HIV diagnosis of a child. In order to adequately care for her young HIV-positive child in the future, a mother will need to feel competent, empowered, and able to be “a good enough mother” despite the child’s HIV infection. Engaging mothers and, whenever possible, fathers in the productive outcomes of HIV diagnostic testing, such as opportunities to stimulate and support the child’s development regardless of HIV, and making preparations for the initiation of treatment; offer timely and important opportunities to build parents’ understanding of the life enhancing and life saving role that they are still able to provide for their child.

While most mothers with HIV-negative child test results will express relief, mothers whose children have HIV-positive test results will likely express remorse and regret post HIV testing. Counseling and support is critical to helping mother and fathers negotiate through this difficult period, especially for sero-discordant couples, where the early diagnosis can create enormous stress on the mother who faces issues of disclosure and stigma as well.

Health care providers should regularly screen for parental mental health issues in order to ensure that maternal mental health is not compromised through depression or anxiety (to which mothers are particularly vulnerable in the early post natal period after trauma or loss). In instances where mothers are withdrawn and depressed, providing a mother–child intervention that focuses on sensitizing the mothers (and where possible fathers) to the responsiveness of the child to maternal cues can assist in refocusing the mother’s attention on the child.

The availability of early testing and diagnosis of infants is vital in helping the parent deal with the process of testing their child for HIV infection. Early diagnosis is also of great benefit to the child, as failure to diagnose a child early can significantly impact on their physical health and growth and development (Van Rie, Dow, Mupuala, & Stewart, 2009).

HIV Illness and Separations

While prompt diagnosis of HIV infection in children is vital so that HAART can be started as quickly as possible, in the absence of antiretroviral treatment programs (as is common in sub-Saharan Africa) when children are forced to live with HIV as a chronic and terminal illness, there is also need for palliative, psychosocial care and treatment. Young HIV-infected children without access to HAART treatment face the physical challenge of a painful and disabling disease and this is often compounded by other cumulative risks such as protein malnutrition, opportunistic diseases, bacterial meningitis, and anemia (Filteau, 2009). Because of their illness, they have to cope with repeated and distressing separations from parental figures during hospitalizations with little or no psychosocial support and very little access to palliative care (Richter, Chandan, et al., 2009). Chronically ill children may experience delays and regression in milestones because their brain is directly affected by the virus, and because of the psychological and social effects of illness and hospitalization (Rochat, Mitchell, et al., 2008).

The lack of access to HAART treatment in sub-Saharan Africa has resulted in more chronically ill and dying HIV-infected children being treated through outpatients or being hospitalized for HIV related illness. This places pressure on health care systems and is likely to impact on the quality of care delivered to children and their caregivers during hospitalizations. Greater numbers of acutely and terminally ill children place nurses under mounting pressure and their training and support seldom equal the demands of care to be delivered. As a means of coping, care systems tend to become more rigid, and nurses become more burnt out and less compassionate (Richter, Chandan, et al., 2009). This makes it imperative for parents to play a role in the care of their children to ensure the regular feeding, bathing and social and emotional care of the child, a task made difficult when ward routines become rule bound in order to cope with daily activities, and times at which parents can visit become less flexible.

Recommendations for Child Psychology Practice

Richter, Chandan, et al. (2009) offer some specific recommendations for increasing nurse sensitivity and compassion and improving caregiving competency to ensure adequate feeding and stimulation of the HIV sick child. Interventions may include providing children with transitional objects and infant massage to help soothe children during painful procedures and difficult separations and allowing for adequate preparation and psychoeducation for future hospital visits and family separations. Advocating for increased parental participation during hospitalizations is important and can improve the parent's skills and competency in the care of children which has been shown to be beneficial for both children and adults outside the context of HIV.

Developmentally, HIV illness can threaten the child by reducing opportunities for stimulation, in particular if children are cot bound and have little opportunity for motor stimulation. Parents tend to be reluctant to engage in vigorous physical stimulation of their young children during times of illness and struggle with a sense of rejection and hopelessness when a child refuses to eat or take medication.

Parents need to be counseled to actively engage in gentle physical stimulation exercises, and to understand that infant distress and crying is contextually appropriate and should elicit soothing responses rather than an expectation that crying should cease altogether. Parents can be encouraged to continue to communicate and maintain enjoyable shared activities such as reading or singing. Emphasis should also be placed on interventions which empower parents and other caregivers to improve children's quality of life and care within the home.

Stigma and Disclosure

Research from other chronic and terminal illnesses such as cancer suggest that children are able to understand and conceptualize illness at far younger ages than generally perceived and that they benefit from open dialogue and reassurance. Despite this, disclosure rates in HIV internationally remain low—and findings by Rochat, Mitchell, et al. (2008) support that disclosure to children one of the most challenging features of HIV infection for parents.

The literature suggests that while caregivers have common concerns that disclosure may harm their children and cause difficulties in their caregiving relationships; this is seldom so (Murphy, Marelich, Stritto, Swendeman, & Witkin, 2002). There is ample evidence that lack of disclosure increases behavioral and emotional difficulties among children and can jeopardize treatment outcomes in HIV-infected children.

Rochat, Mitchell, et al. (2008) found that mothers felt helpless and guilty about infecting the child and expressed fears that the child would reject them if they learned that they had acquired HIV from their parent. Caregivers felt poorly prepared to disclose to children, were unsure regarding what was considered developmentally appropriate with regard to disclosure, and as a coping strategy often deflected responsibility for disclosure onto other role players such as health care providers or educators. Unfortunately low disclosure tends to limit infected and affected children's social networks and support safety nets, often with adverse consequences such as increasing the burden of care placed on children when their adult caregivers succumb to illness.

Disclosure, whether it is disclosure of a child's own HIV status or disclosure of a caregiver's HIV status to a child, is an integral support component of all HIV interventions. Disclosure should be considered a dynamic rather than static process and is distinctly personal and strongly linked to identity, culture, values, and moral beliefs.

Recommendations for Child Psychology Practice

While health care providers are likely to experience high levels of anxiety around issues of disclosure this should not manifest in nurse or physician driven disclosure interventions that are devoid of meaning and value in the family context. Distinctions need to be made between health driven practices and support (medical advice toward disclosure or adherence), which should take place in a health facility, and family practices (undertaking disclosure and soliciting support for oneself and one's children), which need to take place in the home.

A family systems and ecological approach can be used to help encourage parents to see the benefits of disclosure for the individual child, for supporting family relationships and cohesion (in particular sibling relationships where there are discordant siblings in the household), and for ensuring adherence to HIV treatment. Parents should also be encouraged to broaden the social support network over time, ensuring that all key care providers (such as preschool teachers and day care providers) are well informed and able to respond swiftly and appropriately when related needs arise.

There is a dearth of materials, tools, and support for family-based intervention to support developmentally appropriate disclosure practices for parents of young children and this gap needs to be urgently addressed (Rochat, Mitchell, et al. 2008).

Treatment and Adherence

As pediatric HAART treatment has become more available, initial studies are optimistic in their findings of treatment adherence in pediatric populations (Eley, 2008) but research into adherence in pediatric HIV treatment is considered to be in its infancy (Naar-King et al., 2006). Caution has been raised that bad tasting formulation will make successful transition onto treatment and adherence among young children difficult, but Rochat, Mitchell, et al. (2008) found that the initiation of HAART resulted in rapid improvements in the child's health such that parents accepted treatment with enthusiasm, and were highly motivated to ensure compliance, reporting few persistent side effects among children.

Keeping caregiving adults and HIV-infected children motivated once HIV illness abate and HIV is no longer a visual and salient physical threat, or once longer-term side effects have begun to manifest and treatment fatigue sets in, is a challenge. Likewise, as children grow older and begin to demand more autonomy, treatment adherence for them can become a greater challenge requiring more and somewhat different support approaches. Barriers to adherence are frequently cited as financial and social in nature and less frequently related to interpersonal experiences and challenges such as bad tasting medications, unpleasant side effects, treatment stigma, or lack of family support.

Recommendations for Child Psychology Practice

Existing literature on coping strategies to assist children to deal with chronic illness and its associated medication (such as in the case of pediatric asthma treatment) is useful and applicable to supporting children's adherence to HAART. Living positively on HAART treatment, achieving optimal adherence, and dealing with social aspects of HIV disclosure all reside in the family context and interventions should focus on the family environment, routine, and structure. Treatment literacy is an important criterion to success and should not be overlooked when counseling parental figures toward adherence.

Practical strategies can be provided (e.g., using pleasant tasting foods such as peanut butter to reduce the bad taste of medications) to encourage parents but individual families are likely to develop personalized approaches to coping with adherence and resourcefulness and creativity should be encouraged and supported. Social welfare interventions may be appropriate to remove financial or social barriers to continued adherence. At a systemic level, improved integration of the various components of care is critical to minimize the costs and burden of care on families. In practical terms in sub-Saharan settings this means overcoming the challenges to integration and ensuring that young children and their caregivers receive family friendly care, collect medications on the same days, and receive HAART treatment from the same geographical site.

The HIV-Exposed and HIV-Affected Young Child

This is a far larger group of children and the effects of HIV and AIDS on these children and their families is more broadly defined. In South Africa, for example, while 600,000 children were orphaned in 2001, the HIV prevalence estimates for the same year would indicate that 2.5 million South African children were living with a mother who was alive, but HIV infected (Foster, 2006). In these contexts intervention requires support for family and community level interventions that are more generalized rather than specialized individualist child centered interventions.

HIV-Affected Families and Disrupted Childhoods

Hosegood (2009), in a review of family and household changes in response to the HIV and AIDS epidemic, points out two key learnings from the recent decade. First, the HIV and AIDS epidemic has not resulted in high prevalence of child headed households and skip generation families as previously suggested, and second, several misconceptions prevail regarding the dissolution and reconstitution of families affected by HIV and AIDS. Hosegood (2009) examines changes in patterns around family constitution, including formation activities such as marriage, remarriage, fertility and reproduction rates and argues the importance of looking to family dissolution processes (whether related to HIV and AIDS or not) as a natural process in the family life cycle, which in many instances reconstitutes the family in order for it to continue to be effective as a source of support.

In examining the effects of household dissolution and its impact on children, research from a rural part of South Africa suggests that of 39,163 children in a demographic surveillance system, 21% migrated in the first two-year follow-up period. The youngest children (aged zero to two years) were one and a half times more likely to migrate than older children. The high level of migration in young children partly reflects the migration of their mothers after birth; however, young children also migrate independently between households in the context of parental labor migration, childcare provision by other relatives, and low levels of cohabitation among unmarried parents. In sub-Saharan Africa many children who are not orphaned often do not co-reside with their parents, and one of the main family responses to HIV and AIDS has been an increase in the proportion of extended, complex households as compared to smaller nuclear households. The constitution of the sub-Saharan family may thus be fundamentally different to developed contexts and may require different efforts to strengthen it.

Recommendations for Child Psychology Practice

Richter, Sherr, et al. (2009) strongly suggest placing families at the center of all prevention and intervention efforts to support children affected by HIV and argue for improved access to basic services to provide for prevention, treatment, and care; addressing the poverty that worsens the impact of HIV and AIDS through improving basic income and using income transfers; and through building human capital through the protection and enhancement of children's potential through early child development efforts. Strong families are able to mitigate most of the effects of HIV and AIDS for children (Desmond, 2009).

In considering how child psychology responds to the child affected by migration, it is important to critically reflect on what are considered “disruptions” in Western child psychology. For example, one would expect that a migration from living in one household to living in another household, along with changes in care giving and care routines may be disruptive for children, especially young children; however, it is possible that this approach to the management of the care of young children in Africa enhances the quality of care of the child by providing them with the best source of care available to them in their family network at any given time. How disrupted attachments impact on the social and emotional development of the young children in these contexts is relatively unknown and research is required to examine this.

Living with a Chronically Ill Caregiver

There is increasing evidence to suggest that adverse outcomes are as likely for children living with infected parents as they are for those who have already lost their parents. The period during which a parent is chronically ill (before succumbing to death) has been found to be highly vulnerable for most children, often more so than the period after their death (Cluver, Gardner, & Operario, 2007).

Studies in Africa have found that uninfected children born to HIV-positive mothers have higher mortality rates than other HIV-negative children in the community (Nakiyangi et al., 2003). It is further reported that these children have more attention, social adjustment and behavioral problems than comparison children who have been born to HIV-negative mothers (Murphy et al., 2002). It is frequently hypothesized that the mechanisms for these effects relate to the quality of caregiving which is compromised directly or indirectly by HIV and AIDS.

The effect that HIV has on reducing the quality of caregiving has been described in various local and international studies (Cluver et al., 2007; Stein et al., 2005). Under conditions of poverty, caregivers are themselves likely to be deprived of basic needs and thus suffer compromised physical health and susceptibility to opportunistic diseases and illnesses. This will compound the physical and developmental risks for themselves and their children.

Recommendations for Child Psychology Practice

Once caregivers become sick (particularly if they are unable to access treatment and care) they become less physically and mentally able to provide the quality of care necessary for the health and well-being of young children, or to meet the children's unique developmental needs. Providing alternative care assistance is important to ensure that children do not take on the burden of caring for their HIV ill parent or family member. Likewise parental illness may cause disruptions to routines and structure which can be very distressing for a young child. In general interventions at a family level should strive to ensure that children's routines are maintained as much as possible during a period of illness. Whenever possible, children should not be forced to separate from their parents during periods of illness, and reassurance and dialogue about illness symptoms and allowing time for preparation before separations can reduce distress in children.

Child psychology emphasizes the importance of children being informed and included in decisions that affect them, and that having a sense of agency assists with adjustment. The chronically ill caregiver should therefore be encouraged and supported in discussing their illness and its potential consequences with the child. Providing the child with the chance to ask questions and voice their concerns can alleviate distress during this period.

The Loss of a Primary Caregiver

The death of a primary caregiver (in most cases mothers) can be one of the most devastating events for a young child and can have a dramatic effect on the child's chances of survival, education and a healthy life. It is important to try to keep caregivers alive and healthy for as long as possible. In cases where primary caregivers have passed away or migrated for health care services or work, and where elderly caregivers have become substitutes, some evidence suggests that older caregivers are also more likely to suffer health problems which have an adverse impact on children's development. They are often unable to meet the needs of the children they care for.

Children themselves may also experience mental health effects from traumatic experiences such as losing their parents and the related psychosocial distress associated with circumstances of poverty and deprivation (Cluver et al., 2007). Some children experience posttraumatic stress disorder symptoms, depression, and anxiety. Evidence suggests that children affected by HIV and AIDS are more likely to internalize than to externalize their feelings, making depressive symptoms more common than behavioral problems and that this may be worsened by the effects of stigma (Cluver, Gardner, & Operario, 2008). The emotional impact of bereavement and (multiple) losses is known to disrupt childhood development and parenting. These experiences have effects on all aspects of their development, including (at minimum) cognition, sense of self, identity, moral reasoning, social understanding, and perspective taking. Evidence suggests that very young children react to emotional situations such as loss or a death of a caregiver without necessarily understanding the implications (Richter, 2004).

Recommendations for Child Psychology Practice

Extensive literature exists on the management of bereavement and loss in young children and this literature is relevant to children who have experienced loss as a result of HIV. Specifically several preventative measures are encouraged to ensure the child's well-being after the loss of a parent such as ensuring sufficient custody planning and inheritance protection. Interventions such as creating a memory book, using storytelling and metaphors and using play tools to help a child process the loss are important. Ensure stability of care and resumption of routine as soon as possible after the loss of a caregiver, is also helpful to children's adjustment to loss.

As HIV related deaths are often associated with stigma and shame, children are sometimes not encouraged to share their thoughts and feelings regarding the death of their parent. At times the truth of their parent's passing is kept from the child. The bereavement process is thus complicated by a sense of "taboo," with the child often aware that there are unspoken elements and secrets. Where possible children should be invited to participate in conversations with sensitive caregivers who are able to answer their questions and respond to their pain and confusion in appropriate ways.

HIV AND AIDS AND ADVOCATING FOR CHILDREN'S RIGHTS

As the biomedical evidence on children and HIV and AIDS has grown, so has the demand for a clearer understanding of the social, psychological and behavioral explanatory variables and social context within which children live—which may impact on and mediate outcomes in large scale prevention and intervention work. This chapter has demonstrated that the impact of HIV and AIDS on children and families in sub-Saharan Africa is vast and several recommendations for child psychology practice have been made. Beyond best practice guides, policy advocacy needs to be undertaken to ensure that children's rights and needs are met.

Children's Rights and the Justice Framework

The UN Convention on the Rights of the Child (CRC) decrees that in working with children the focus needs to be on justice and participation—where children are treated as more than just objects. Furthermore it lends international pressure to ensure these rights are upheld.

The four key areas of child rights that signatories are charged with respecting and ensuring are the following:

Survival rights: the right to life and the things children need to stay alive
Development rights: the right of children to the things they need to fulfill their full potential
Protection rights: safeguards against all forms of neglect and abuse
Participation rights: rights that allow children to take part in affairs that affect their lives

In the context of HIV and AIDS these rights are often violated when HIV-infected children do not have access to life saving HIV treatments; or when HIV-affected children do not have sufficient health care services to protect them from childhood illness; when children's development is jeopardized by poverty, poor access to early child development programs and resources which could prevent the illness and loss of their caregivers; when children are made vulnerable to exploitation, neglect or abuse in the care of others after they have lost their caregivers to HIV; and when children are not able to participate meaningfully in the issues of their own treatment, placement and care.

Policy Advocacy

Currently advocacy is required to reform harmful and ineffective policies and to ensure the implementation and enforcing of good policies. In particular advocacy needs to ensure the following changes for children:

1. that all children have access prevention interventions such as mother to child transmission prevention services
2. that all HIV-exposed children have the right to early diagnostic testing for HIV and that their parents, families, and support networks have access to treatment, support, and care
3. that all HIV-infected children have a right to specialized life saving treatment, care, and support when they need it

Sprechman and Pelton (2001) suggest that policy advocacy can encompass many levels of decision makers from legislators to service delivery stakeholders and should not be limited to those working for central government. The goal of advocacy should be to ensure that the treatment and care of infected, exposed and affected children and their families implemented and to ensure that this implementation takes cognizance of three important principles: first to strengthen families, second to ensure early intervention for young children, and third to build resilience.

STRENGTHENING FAMILIES

Young children survive and thrive in the context of family and they cannot be considered in isolation. A significant body of research has demonstrated that interventions aimed at well-being and behavior change which have meaning in personal frameworks and make practical sense in people's cultural frameworks are more likely to bring about sustainable and meaningful change (Mkhize, 2004). Likewise, research with at risk families indicates that a family's satisfaction with the support received is more important in determining a sense of competence and improving outcomes than the size of the support network or the total amount of help received (Cook, Fritz, & Mwonya, 2007). In many respects, understanding the importance of everyday family practices opens an opportunity to take small and achievable steps toward helping children. More importantly it provides a clear set of intervention ideas with which families and other community members can engage. This provides an opportunity to support and encourage families to feel valued in the care of their own children.

EARLY INTERVENTION

International evidence suggests that ensuring that children have an opportunity for normal and healthy development in the early years is an effective strategy for building resilience for the adolescent years and later life and of reducing poverty among disadvantaged populations (Grantham-McGregor et al., 2007; Shonkoff & Meisels, 2000). Efforts to mitigate the impact of HIV and AIDS need to pay particular attention to the developmental needs of this age group, in particular since these early child development tasks form the basis of later social, emotional, and mental health.

RESILIENCE

Resilience is positive adaptation in the face of significant threat and it refers to individual variations in abilities to cope positively in the face of adverse and threatening circumstances (Rutter & the ERA study team, 1998). Evidence from resilience research is highly relevant to the context of HIV. Evidence on enhancing resilience should encourage that priority be given to ensuring that all children have a stable and consistent, responsive caregiver or the presence of a replacement caring adult who will champion for the child, invest in the child's future and have hope for them.

FUTURE RESEARCH

Future research needs to strive to be more empirical, use standardized measures and to allow for the elucidation of cultural and coping practices and what they bring to children's lives. It is important to note that these types of research are most commonly undertaken on behalf of children, or conducted on children or for children, but are very seldom undertaken in participation with children as active participants in the research.

CONCLUSION

The sheer extent of the epidemic requires that all communities, starting from small units of care, such as families but extending to external support organizations, civil society, government, and the international community need to invest in ways to bring children into a new hopeful era. These investments in community need to be integrated to use resources effectively and be thoughtful and sustainable if they are to hold value for children in the longer term and build resilience in the shorter and medium term.

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Chapter 4

EARLY PREVENTION AND INTERVENTION PROGRAMS IN EUROPE

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In recent years, social policy makers of the European Union (EU) have drawn more attention to the importance of a healthy development in the early years including pregnancy and infancy. The European Commission has recently defined their future strategy for mental health promotion: "Mental health is strongly determined during the first years of life, promoting mental health in children and adolescents is an investment for the future. Teaching parenting skills can improve child development. A holistic school approach can increase social competencies, improve resilience, and reduce bullying, anxiety and depressive symptoms" (European Commission, 2005, p. 8). Accordingly, the EU supports projects that address postnatal depression in mothers and promote parenting skills (home visits of nurses to assist future and new parents), a conducive school environment, resource packs on mental health for students, parents and teachers. But compared to the United States, there are still not many comparable early prevention and intervention programs, which are systematically established and evaluated. Moreover, while there are a number of European projects supported by the EU in the area of mental health (see Mental Health Europe, 1999), mental health promotion in children is not well coordinated.

Two primary settings can be addressed to promote children's mental health: families and schools. For example, Mental Health Europe (1999) emphasizes the role of families: "There is strong evidence that the early years of life have a crucial impact on mental health throughout the life cycle. The development of strategies to promote the mental health of young children is therefore of fundamental importance. This involves raising awareness of the significance of the mental well-being of children, as well as interventions to support parenting, to facilitate positive relationships between parents and children, to improve child-rearing conditions and to protect vulnerable children" (p. 9). Schools have also been identified as a key setting: "An effective school health program can be one of the most cost-effective investments a nation can make to simultaneously improve education and health" (WHO).[1] The importance of schools is generally acknowledged when addressing mental health promotion in adolescents but less strongly when discussing mental health promotion in younger children. As there is a clear tendency in many European countries that governments support mothers going back to work during the first three years after childbirth, infants are exposed to early institutional day care settings and preschool programs. Young children are educated in schools or comparable educational institutions like preschools or kindergarten from three to four years and/or attend day care centers from infancy onward. Therefore, besides focusing on the family setting, it is also important to promote children's well-being in educational and day care settings as early as possible.

In this chapter, we will present three family-oriented prevention programs in Germany, France, and Ireland as well as three preschool programs which are currently established and evaluated in Germany, Lithuania, Denmark, Switzerland, and other European countries. The described programs have in common that they serve as model programs in their countries/communities and that they have committed themselves to rigorous scientific evaluation. Especially the family-oriented programs have been stimulated by U.S. programs like the Nurse- Family Partnership (NFP) program. But as the social and cultural conditions in different European societies are so heterogeneous and different from the United States each of these prevention programs had to develop their own culturally appropriate way to address the focused population of young families with infants at risk.

FAMILY-BASED EARLY PREVENTION STRATEGIES

Prenatal and Infancy Home Visiting in Germany: The Pilot Project Pro Kind in Saxony

Background

Early experiences in the first three years in life are fundamental for health, cognitive development, and social-emotional functioning in childhood and adulthood. Longitudinal studies suggest that targeted, early prevention programs aimed at disadvantaged families are an effective means of reducing delinquency and crime, fostering personal development (e.g., educational attainment, earnings, social competence), and facilitating government savings (e.g., reduced social welfare spending). Generally, investment in early preventive programs is often more cost-effective than later remediation (Carneiro & Heckman, 2003). Consequently, policy makers in Germany have more and more committed themselves to fund early prevention programs during this age period, for example, the program Pro Kind.

The home visitation program Pro Kind is a German version of the U.S. Nurse-Family Partnership program, first introduced to Germany in 2006 by the Leibniz University of Hannover and the Criminological Research Institute of Lower-Saxony. The NFP program which has been tested in three separate large-scale, randomized controlled trials in the United States over 30 years is one of the few rigorously evaluated early prevention programs. A follow-up study at age four found that nurse-visited children whose mothers had low levels of psychological resources at registration, compared with control group counterparts, demonstrated home environments that were more supportive of children’s early learning, more advanced language, superior executive functioning, and better behavioral adaptation during testing (Olds, Robinson, et al., 2004). Nurse-visited mothers with six-year-old children showed fewer subsequent pregnancies, longer relationships with current partners, greater workforce participation, and fewer months of using welfare. Their children had higher intellectual functioning, receptive vocabulary scores, and fewer clinical behavioral problems (Olds, Kitzman, et al., 2004). A follow-up study conducted in adolescence reported that the children in the treatment group experienced lower rates of child abuse and neglect, and reported in their adolescence fewer lifetime sexual partners, fewer convictions and violations of probation as well as fewer cigarette smoking and consuming of alcohol than the control group (Olds et al., 1998). Furthermore, results suggest that prenatal and infancy home visiting by nurses can moderate the risk of child maltreatment as a predictor of conduct problems and antisocial behavior among children and youth born into at-risk families (Eckenrode et al., 2001). In addition to preventing the occurrence of negative outcomes that were direct targets of the intervention, the NFP more generally enhanced mothers’ ability to cope with future stressful life events (Izzo et al., 2005). Moreover, the NFP program exhibited a positive cost-benefit ratio (see Lutz, 2007). Nevertheless, program effects were most evident for the subgroup of young, primiparous, unmarried, low socioeconomic status mothers with few psychological resources (e.g., Olds et al., 1998). Moreover, there is lack of rigorous evidence concerning the effectiveness of the NFP program in a European context.

Since January 2008, the NFP adapted Pro Kind program has been established in the state of Saxony in the eastern part of Germany by the Felsenweg Institute Dresden and scientifically evaluated by the Department of Child and Adolescent Psychiatry of the University of Leipzig. Pro Kind is especially important in East Germany, because the society here is—21 years after the fall of the Berlin wall—still confronted with transitional demands like social and economical problems which sometimes have an unfavorable impact on children's development and health. This section discusses program rationales, intervention components and evaluation design of Pro Kind.

Program Rationale

In line with the results from NFP, Pro Kind registers primiparous, low-income women from 12th until 28th week of gestation. To the extent that they improve their prenatal health, care of their firstborns, and their life course, these women are likely to apply those skills to subsequent children. Additional criteria for inclusion in the target group include being under age, having a poor education, having dropped out of school or vocational education and training, poor social integration, drugs and alcohol problems, having experienced a lack of love and attention or abuse in childhood, and partnership problems with the child's father or experiences of domestic violence.

By the end of the recruitment phase in December 2009, about 755 families were enrolled in the program in Germany, 250 of them in Saxony. The sample is classified as disadvantaged as approximately 60% of the participating women in Saxony receive public support, 55% are out of work and 49% are indebted. Similarly, only 2% have a third level education. In terms of ethnicity, the community is fairly homogenous, with 3% of the sample being born outside the country. With respect to other psychosocial disadvantages, 49% of the participating women report loss of a significant caregiver in childhood, 36% report past abuse experiences, 60% had not the apparent wish to get pregnant and 49% smoke regularly.

According to the standards of the NFP program, Pro Kind is a home-visiting program that seeks to reduce pre- and postnatal risks and promote protective factors for poor birth outcomes, neurocognitive impairments, child abuse and neglect, injuries, and compromised parental life course. These reduced exposures to prenatal toxicants, abusiveness and neglect, and adverse family environments are expected to shift the child's health and development toward greater behavioral regulation, neurodevelopmental functioning as well as interpersonal and cognitive competence. More specifically, mothers' prenatal health, family functioning and economic self-sufficiency are to be enhanced. In Germany, home visitors consist of specially trained and supervised midwives and social pedagogues. They have three major goals: (1) to improve the outcomes of pregnancy by helping women to improve their health behavior, (2) to improve the child's subsequent health and development by helping parents provide more competent care, and (3) to improve the parents' life course by helping them develop visions for their future and then make well-informed choices about planning future pregnancies, completing their education, and finding employment.

Intervention Components

The home visitors follow detailed visit-by-visit guidelines that reflect the challenges parents are likely to confront during specific stages of pregnancy and the first two years of their child's life. The recommended frequency of home visits changes with the stages of pregnancy and is adapted to parents' needs. The program content is grounded in three psychological theories.

According to the human ecology theory (Bronfenbrenner, 1992), the home visitors attempt to enhance women's social and material resources by involving other family members, especially fathers, in the home visits, and by linking families with needed health and human community services. Within the concept of self-efficacy (Bandura, 1977, 1982), women's decision making about their health related behavior during pregnancy, their child care, and personal development can be outlined and transformed into realistic and achievable goals that, once accomplished, increase parents' reservoir of successful experiences. In line with the theory of human attachment (Bowlby, 1969), Pro Kind explicitly promotes sensitive, responsive and engaged care giving in the early years of the child's life. The home visitors help mothers to review their own child-rearing histories and make decisions about how they wish to care for their children in light of the way they were cared. Additionally, the home visitors try to establish an empathic and trusting relationship with the mother and other family members. The quality of the helping relationship between visitor and mother is particularly important, because it was found to be a significant predictor of program participation, over and above general program satisfaction (Korfmacher, Green, Spellman, & Thornburg, 2007).

Evaluation Design

In order to evaluate if home visiting in Germany is a means of breaking the link between early adverse circumstances and developmental problems a longitudinal randomized control group design (Efron's biased coin design) is realized. Women are assigned at random either to the treatment or to the control group. Members of both groups get various supplies (e.g., information about existing health or social services, repayment for travel expenses to preventive medical checkups, reimbursement for regular research attendance, feedback about the child's developmental status), but only the women of the treatment group receive the described home visitation.

Data are collected at program intake before randomization (baseline; t0), by the end of pregnancy (approximately at 36 weeks of gestation; t1), and at 6 (t2), 12 (t3), and 24 (t4) months of the child's age. Face-to-face interviews with the women containing detailed standardized questionnaires are conducted at every assessment. Beyond demographical characteristics, the questionnaires assess numerous variables like parenting sense of competence, parental expectations, maternal health, attachment, perceived stress, life satisfaction, coping, received social support, empathy, aggressiveness, delinquency, quality of home environment and early experiences with primary caregivers. Additionally, data concerning the children's cognitive and psychomotor development (Bayley Scales of Infant Development–II; Reuner, Rosenkranz, Pietz, & Horn, 2007), language development (SETK-2; Grimm, 2000), as well as their mental health characteristics (Child Behavior Checklist; Achenbach, 1991) are collected by trained interviewers. Videotaped sequences of play interactions between mother and child are analyzed in terms of mothers' sensitivity and child's cooperation according to the CARE-Index (Crittenden, 2006). Moreover, characteristics of child's temperament and mothers' behavior during the videotaped test situations are assessed. This objective data is aimed to expand and validate maternal self-reports which run the risk to be socially desirable.

Beyond single assessment of mothers' and child's characteristics, different features of the present partners (partly the biological father of the child) are considered in Saxony. Involvement of the partner is conceptualized by diverse variables which are comparable to those assessed for women (e.g., parenting competencies, paternal health, social support, early experiences with primary caregivers, delinquency), rather than by demographic characteristics and economic contributions on its own. As there is little research on father perspectives in early childhood home-visiting programs (Korfmacher et al., 2007), Pro Kind offers the opportunity to further illuminate the fathers' impact on mothers' characteristics and child's early development in socially disadvantaged families.

A further research focus in child's early environment forms women's and their partner's relationship satisfaction. According to Belsky (1984), parenting is influenced by contextual sources of stress and support, and reflects a positive cycle whereby success in one relationship is associated with success in other relationships. For example, men and women who are satisfied with their partnerships are more likely to enjoy their role as parents and demonstrate competent parenting behavior.

Parallel to this, a process evaluation is being conducted to assess program implementation which is necessary for a proper estimation of program effectiveness and can guide program refinement and dissemination as well (Brand & Jungmann, 2008). Moreover, a cost-effectiveness study which compares the relative expenditure against the relative outcomes is conducted. This analysis will inform and guide policy makers on the most cost-effective methods for improving children's mental health.

Update and Conclusion

Pro Kind will continue until 2012. Currently, the 6-month (t2), 12-month (t3), and 24-month (t4) surveys are in the field. The second wave of data collection in late pregnancy (t1) will be completed in May 2010. Preliminary results of women's self-reports and child's development scores show that significant effects of prevention on maternal health behavior during pregnancy and child health outcomes are not found until now and only the cognitive development of treatment group children between 6 and 12 months of age is significantly enhanced (Jungmann, Ziert, Kurtz, & Brand, 2009). These previous outcomes are in line with international meta-analyses showing that small to moderate effects of early childhood prevention were mostly found only in the long term (Sweet & Appelbaum, 2004). Limited evidence of success results partly from the fact that highly distressed families are more likely to drop out of programs. Moreover, when they are successfully engaged, needs of families facing exceedingly complex social and economic disruptions typically overwhelm conventional early childhood program staff whose expertise is restricted to child development and parenting education (MacMillan et al., 2007). Nevertheless, more detailed analyses are necessary which are not solely based on self-report data of the nurse-visited mother, but also concern other family member's views, especially the present partner, and objective behavioral ratings. Those measures may be more appropriate and cast a different light on intervention results.

The CAPEDP Program in Paris

Background

Early childhood health protection in France is built around a 60-year-old institution known as the Protection Maternelle et Infantile (PMI). This system, set up by the French National Resistance Council in the postwar period with the explicit aim of reducing high rates of child and maternal morbidity and mortality, provides systematic social and health care support to all mothers and their babies. Although the role of the PMI in the undoubtedly positive public health effects of the child protection system has been widely acknowledged, for example, with a fivefold reduction in infant mortality over 50 years, the PMI and indeed all services working with young children are today faced with considerable difficulty in the area of mental health, particularly problematic in urban areas with high levels of population density, social exclusion and stress. In these difficult urban contexts, professionals find themselves concentrating first on highly vulnerable families with multiple and pressing needs and second on relatively well integrated mothers who present spontaneously in PMI centers. Between these two extremes, lies a less well-known population of often isolated families, in situations of relative vulnerability (low-income, unemployed, inexperienced, with reduced social support networks) who have little contact with the wide variety of preventive care and support possibilities available.

The CAPEDP project arose from a desire to consolidate access to perinatal and early childhood mental health promotion services for these families, by proposing early home-visiting support for vulnerable families aiming on the one hand to reduce the incidence of maternal postnatal depression and infant mental health problems and, on the other, to promote parenting skills, infant–mother attachment security and social and professional integration.

The CAPEDP Program

CAPEDP is an action research project[2] aiming to evaluate the efficiency of a home-visiting program targeting young mothers in situations of psychosocial vulnerability. The visits, beginning at the seventh month of pregnancy and continuing through to the child's second birthday, are conducted by psychologists specifically trained in perinatal and early childhood health and mental health promotion.

Over a period of 27 months, 440 pregnant women were recruited in 10 maternity services situated in inner Paris and the neighboring suburbs using the following recruitment criteria: less than 26 years old, primiparous, agreeing to participate, speaking enough French to be able to benefit from the home visits and presenting one or more of the following three criteria: (1) less than 12 years of schooling; (2) intending to raise the child alone, without their father; and (3) eligible for the minimum benefits allowance (in 2010, €590 per month).

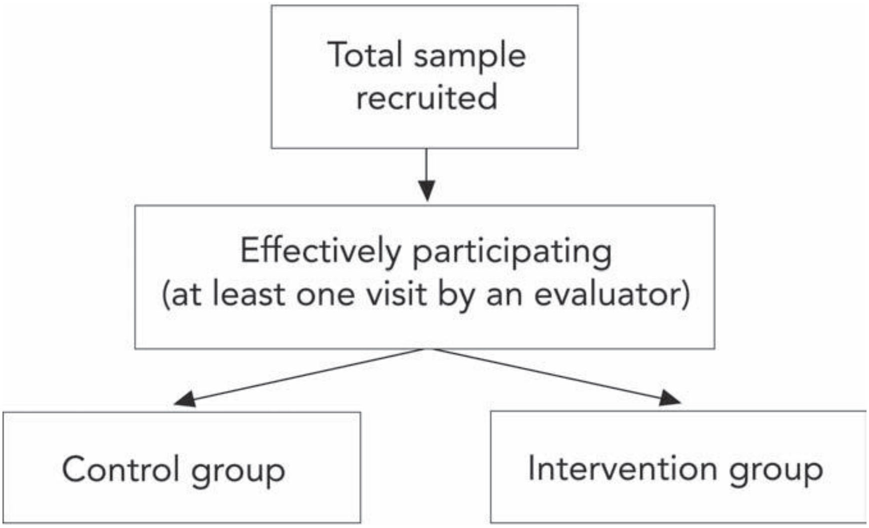
The socioeconomic characteristics of the study population reveals high levels of vulnerability factors. The mean age is 22.1 years, 85% have less than 12 years of education, 41.1% have an income lower than €840 per month and 26.7% of the mothers intend to raise the child without his father. More than one mother in two (55.0%) are immigrants, and 81.4% are daughters of immigrants.

After consenting to participate in the research project, the 440 women were randomly assigned to care as usual (control group) or to the CAPEDP home-visiting program (intervention group) using PROBE (prospective randomized open-blinded endpoint study) methodology.

Intervention Components

CAPEDP is based on the intervention paradigm initially described by David Olds in the 1970s in New York State (Olds, 2006): for interventions to be effective, they should begin early, be sustained, evaluated,

Figure 4.1
Design of the CAPEDP intervention study



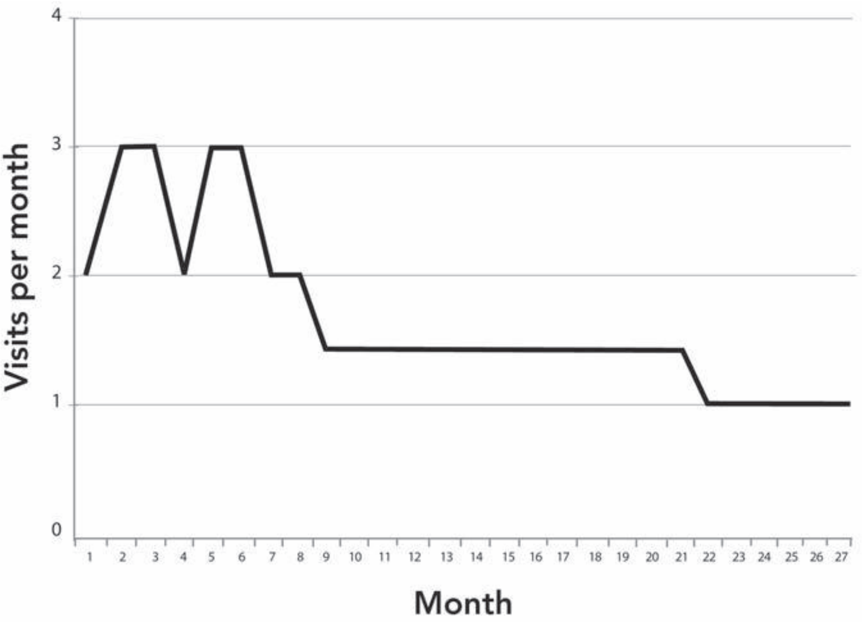
supervised, manualized and take place in the family's home. CAPEDP, drawing on an ecological approach (Bronfenbrenner, 1979), self-efficacy (Bandura, 1977) and attachment theory (Bowlby, 1969), rigorously respected these recommendations. After a 10-day initial training program, psychologists conducted their home visits using the early intervention manual developed by the Florida State University Center for Prevention and Early Intervention Policy (Stabile, Graham, Powell, & Chiricos, 2004), with a particular focus on the prevention of maternal mental health problems (perinatal depression, parental stress) and infant withdrawal. Home visitors received one-to-one supervision on a weekly basis and group supervision every two months.

Themes treated during home visits included (1) the mother's health and mental health, (2) the child's health and mental health, (3) the mother–child relationship, attachment security, (4) knowledge and skills concerning parenting, (5) understanding your child's needs, (6) using your

Table 4.1
Overview of the measures and assessments used in the CAPEDP intervention study

Criteria	*Evaluation instrument*	*Evaluation (child's age in months)*
Pre- and postnatal depression	Edinburgh Post Natal Depression Scale	3, 6, 12
Parenting skills	Home Observation Measurement of Environment	3, 12, 18
Behavioral disorders	Child Behavior Checklist	24, 30
Withdrawal	Alarm Distress Baby Scale	18
Attachment	Attachment Q-Sort	18
	Strange Situation	12 (subgroup)
Use of professional networks	CAPEDP Service Use Questionnaire	3, 6, 12, 24
Social support	CAPEDP Social Support Questionnaire	3, 6, 12, 24
Parental cognitions and conduct toward the infant	Parental Cognitions and Conduct Toward the Infant Scale	3, 12, 24, 30
Physical development	Brunet-Lézine Scale	6, 12, 24, 30
Knowledge of infant development	Knowledge of Infant Development Inventory	3, 24, 30
Parental stress	Parental Stress Inventory	3, 6, 12, 24, 30

Figure 4.2
Frequency of home visits during intervention



personal social network, (7) using available medical and social services, and (8) employment and training.

The specificity of the CAPEDP approach is that the entire team of home visitors are mental health specialists who have all received specific training on health promotion and on social and community inclusion and integration. At the same time as focusing on infant–mother attachment security, interventions systematically seek to encourage and involve family, friends, and community support as well as to facilitate use of local medical and social services—essential issues for this population of often isolated migrant mothers in high density urban contexts.

Today, in April 2010, one year before the end of the project, nine psychologists, each with a maximum caseload of 25 families, have conducted over 5,000 home visits. Currently, 1,060 home visit reports with 107 first families are being analyzed with the aim of providing an initial qualitative description of intervention techniques.

Evaluation Design

Of the 440 families who agreed to participate in the study, 374 (85.0%) received at least one evaluation visit. Similar rates of initial attrition have been reported in different studies in varying cultural contexts (cf. the Hawaiian Islands Healthy Start Program; Duggan et al., 1999). Families were evaluated at seven points during the intervention, with the first evaluation taking place during the seventh month of pregnancy. All evaluation visits took place at the participant's home. A subgroup, recruited on a voluntary basis, was also assessed, between the child's 12th and 15th months of age, in a specialized video laboratory using the Strange Situation (Ainsworth, Blehar, Waters, & Wall, 1978).

Update and Conclusion

The CAPEDP intervention began in December 2006 and will come to a close in July 2011. A little over a year before the end of the study, the attrition rate at the children's first birthday is less than 45%, a rate similar to that described in other studies in vulnerable populations (Duggan et al., 1999; McGuigan, Katzev, & Pratt, 2003). Being the first large-scale randomized controlled prospective study in infant mental health promotion and prevention in France, CAPEDP will be invaluable for developing recommendations on mental health promotion and prevention interventions for mothers and children in difficult psychosocial situations in urban contexts. By focusing on attachment security at the same time as on social and medicosocial integration and inclusion, CAPEDP seeks to expand on traditional home-visiting approaches centered on the child as an individual, to include both the mother, and her network as well as the community as a whole.

The Preparing for Life Early Childhood Intervention Program

Background

The intergenerational transmission of socioeconomic inequalities in children's health, and cognitive, behavioral and emotional development emerge early, and can persist through life (Najman et al., 2004; Shonkoff & Philipps, 2000). Limited evidence, primarily from the United States, suggests that targeted, early intervention programs aimed at disadvantaged children and their families are an effective means of reducing these inequalities. Early childhood interventions are programs that attempt to improve child health and development from conception to six years of age with the expectation that these improvements will have long-term benefits for child development and well-being (Wise, da Silva, Webster, & Sanson, 2005). These studies find that the personal benefits (e.g., cognitive development, behavior and social competence, educational attainment, earnings), social benefits (e.g., reduced delinquency and crime) and government savings (e.g., higher tax revenues, reduced social welfare spending), associated with intervening early in a child's life clearly outweigh the costs (Karoly, Kilburn, & Cannon, 2005). This section discusses a new early childhood intervention that has been initiated in Ireland.

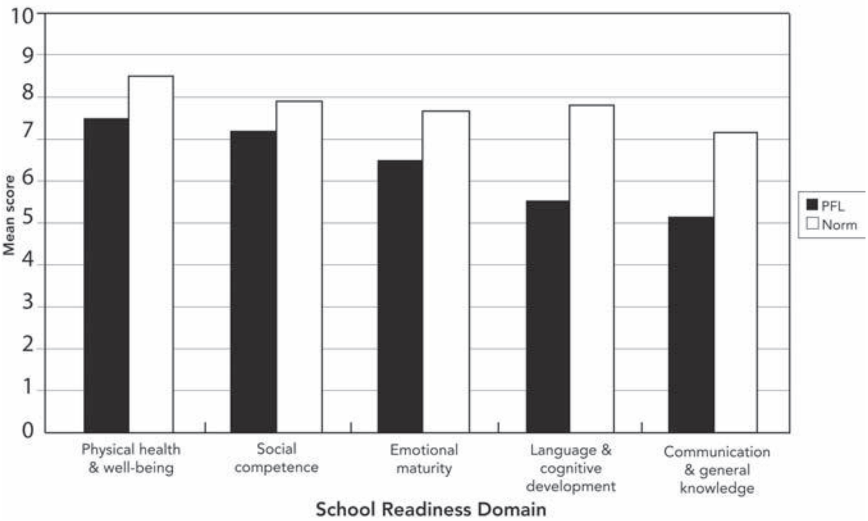
Program Rationale

Preparing for Life (PFL) is a five-year school readiness program involving the recruitment of a cohort of 200 pregnant women residing in a disadvantaged area of North Dublin. The community is classified as disadvantaged as approximately 63% of its 6,439 inhabitants live in social housing (3.5 times the national average), while 14% of its adults are out of work (compared to the national average of 4.8%). Similarly, only 5% of adults in the community have a third level education, compared to a national average of 25%. In terms of ethnicity, the community is fairly homogenous, with only 7% of the population being born outside the country (Central Statistics Office, 2006).

The PFL program is a community-based initiative which was developed in a bottom-up approach involving 28 different community groups, local service providers and representatives from the local community. It is funded by the Irish government, under the Office of the Minister for Children and Youth Affairs, and Atlantic Philanthropies. It was developed based on the recognition that children from this specific area were lagging behind their peers in terms of both cognitive and noncognitive development. A representative survey assessing levels of school readiness of children aged four to five attending the local primary schools found that teachers rated children in the PFL community as displaying significantly lower levels of school readiness than a Canadian norm (Doyle, Cheevers, Finnegan, McEntee, & McNamara, 2009), on the Short Early Development Instrument (Janus, Duku, & Stat, 2005). In particular, teacher reported ratings were lowest in the cognitive domains of language and cognitive development, and communication and general knowledge.

The primary focus of PFL is to improve these low levels of school readiness which has been associated with poor peer relationships, psychological well-being, and academic achievement, and higher levels of unemployment, teenage pregnancy and criminal activity later in life. PFL operates under a holistic definition of school readiness composed of five dimensions: (1) physical health and well-being, (2) socioemotional development, (3) approaches to learning, (4) language development and emergent literacy, (5) and cognitive and general knowledge.

Figure 4.3
Mean levels of school readiness in the PFL catchment area compared to a normative Canadian sample



Intervention Components

The inclusion criteria for the program are based solely on geographical residence and pregnancy status, and therefore include both primiparous and nonprimiparous women. In total, 200 women are being recruited from maternity hospitals at their first booking visit. On recruitment, the women are randomly assigned to either a high-supports treatment group or a low-supports treatment group. Families in both groups receive developmental toys annually and facilitated access to one year of enhanced preschool in the local child care centers. In addition, both groups are encouraged to attend public health workshops focusing on stress control and nutrition. Finally, participants have access to a PFL support worker who can help them access additional services if needed.

The participants in the high treatment group receive two additional services. First, each family has a dedicated mentor who visits the home for between 30 minutes and two hours per week starting during pregnancy and continuing until the child is five years old. The aim of these weekly home visits is to support and help parents with key parenting issues using a set of PFL developed tip sheets. The mentoring involves (1) building a good relationship with parents, (2) providing them with high quality information, (3) being responsive to issues that arise, and in these ways (4) enabling parents to make informed choices (where possible encouraging and supporting good practice), and (5) signposting them to other relevant services. The mentors focus on five general areas (1) prebirth, (2) nutrition, (3) rest and routine, (4) cognitive and social development, and (5) mother and her supports. The PFL program is therefore similar to the NFP (Olds et al., 1999), however its duration extends to age five compared to the usual two years.

Second, participants in the high treatment group also participate in group parent training using the Triple P Positive Parenting program (Sanders, Markie-Dadds, & Turner, 2003). Triple-P aims to improve positive parenting through the use of videos, vignettes, role play, and tip sheets in a group-based setting for four consecutive weeks (two hours per week), three times during the program. The program has been subject to multiple rigorous evaluations which have demonstrated positive effects for both parents and children (Sanders, Markie-Dadds, Tully, & Bor, 2000).

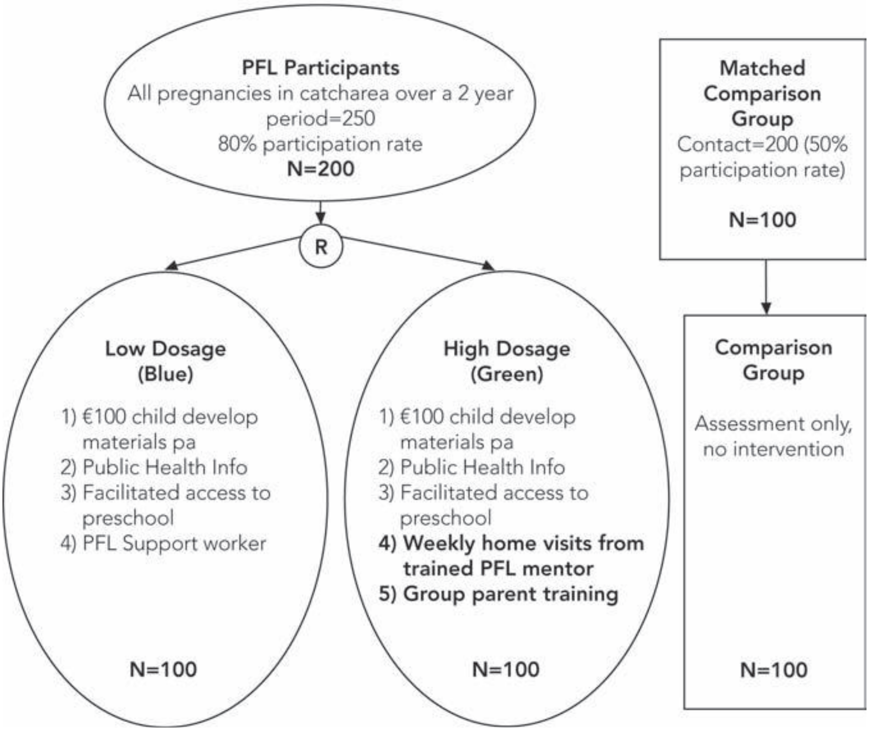
The high and low treatment groups are also compared to an additional 100 families from a matched comparison community that was selected using small area population statistics and cluster analysis to ensure a sociodemographically similar profile to the PFL community.

Evaluation Design

The effectiveness of the PFL program is being evaluated using an experimental longitudinal design that collects data on the children's physical health and motor skills, social and emotional development, and behavior, learning, literacy and language development, and the parent's pregnancy behaviors, physical and psychological health, cognitive ability, personality, and parenting skills from pregnancy onward. Data are collected from all three groups at preintervention, 6 months, 12 months, 18 months, 24 months, three years, four years, and five years. The mother is the primary informant, however information is also obtained from fathers, the child, siblings, and other independent data sources, such as hospital records.

Parallel to this, a process evaluation is being conducted using a multisequenced design integrating systematic self-reporting by program staff, focus group methods (three sessions throughout the course of program), qualitative analytical techniques and semistructured interviews with program staff to assess program implementation and fidelity. In addition, implementation data recorded by program staff (using a Web-based Database Management System) are also being tracked on an ongoing basis to measure program participation and service provision.

Figure 4.4
PFL longitudinal experimental design



Update and Conclusion

The program began in January 2008 and will continue until 2013. Recruitment is ongoing with 196 of the 200 participants in the treatment groups and 70 of the 100 participants in the comparison community being recruited to date. Currently, the preintervention, 6-month, 12-month, and 18-month surveys are in the field. The first full wave of data collection will be completed in 2010. This experimental program is the first of its kind in Ireland and aims to provide real time evidence on best practice in early intervention.

CENTER-BASED EARLY PREVENTION STRATEGIES

As shown in the previous sections, family-oriented prevention programs during pregnancy and infancy are promising strategies to promote children's mental health. These prevention approaches address the development of the individual in the family and therefore are intensive and costly. Home visitation programs are thus mainly recommended for use with high-risk families. The eligibility of families which can benefit from the intervention is based on proxy risk factors (e.g., socioeconomic status or age and marital status of the mother). While this approach includes a very important subgroup of high-risk families, we will nevertheless miss other children who are also at risk of developing mental health disorders. Moreover, not all families selected for the interventions are willing to participate and there are usually considerable drop out rates. Therefore, as children enter the more "public domain" of day care centers or preschools, we get a second chance to promote children's mental health. In addition, important additional risk factors for mental health disorders emerge in the specific context of the peer group. Peer rejection and victimization (i.e., being a victim of peer aggression and bullying) has been identified as important risk factor for mental health problems as well as for victims and for bullies (Perren, von Wyl, Stadelmann, Bürgin, & von Klitzing, 2006; Stassen Berger, 2007). Therefore universal prevention approaches in preschool and school settings remain very important.

Different preschool and school programs have been developed and evaluated to promote children's and adolescents' mental health, social skills, coping skills and positive peer relations (see also Malti & Perren, 2008). Since the 1950s, schools have been a popular setting for health promotion and health education. In contrast to the U.S. setting (Early Head Start programs), early prevention initiatives starting before formal schooling (e.g., in day care centers, preschools and kindergartens) are not very widespread in Europe. Most mental health promotion approaches have been implemented in primary and secondary school levels (i.e., at mandatory schooling age). Reviews on universal preventive approaches in school age provide evidence that these programs can be effective (e.g., Beelmann & Raabe, 2009; Horowitz & Garber, 2006; Kraag, Zeegers, Kok, Hosman, & Abu-Saad, 2006; Stewart-Brown, 2006).

Reviews have suggested so far that school-based approaches are more efficient in older populations than younger populations. However, from a developmental perspective this result is counterintuitive. As children's behavioral and emotional problems tend to become chronic over time, and escalate to more serious problems with the accumulation of further risk factors, efforts preventing child behavior problems should start during early developmental stages, for example, at preschool age (Conduct Problems Prevention Research Group, 2002; Han, Catron, Weiss, & Marciel, 2005; Tremblay, LeMarquand, & Vitaro, 1999; Webster-Stratton, Reid, & Hammond, 2001). In addition, appropriate prevention programs for preschoolers should be developmentally focused; that is, they should build on empirically derived models of normal and abnormal developmental pathways, and on evidence about factors that either facilitate and promote child development, and hinder or alter it (Malti, Noam, & Scheithauer, 2009; Tremblay & Craig, 1995).

Also in Europe, clinicians and researchers have started several initiatives to implement universal prevention approaches in center-based day care or preschool/kindergarten settings. However, the heterogeneity of the formal organization of day care and preschool education between and also within European countries is huge (OECD, 2006, 2007; Stamm, 2009), and prevention approaches also show the corresponding heterogeneity. In the current section, three approaches which involve different target groups (age zero to seven), with different intervention foci (promoting social skills, coping skills and resilience) and with different theoretical background will be described: Zippy's Friends, Papilio, and Learning Stories.

Zippy's Friends: Promoting Coping and Social Skills in Kindergarten and Early School Age

Rationale and Program Components

Zippy's Friends is the most widespread universal prevention program in preschool and early school age in Europe (and other countries) (http://www.partnershipforchildren.org.uk/). Zippy's Friends helps children from five to seven years old to develop coping and social skills. The focus is on children learning to cope with everyday difficulties in order to help them develop coping abilities, which will be useful throughout their lives in a wide range of situations. Zippy's Friends emphasizes the importance of using and giving social support (collective involvement). A crucial component of the program is increasing communication between children and others around them. Zippy's Friends also teaches children how to help others solve problems and how to intervene in others' conflicts.

Program development was based on research findings that a person's emotional well-being can be affected by how they perceive a stressful situation and how competent they are at reacting to it (Cloninger, Svrakic, & Prysbeck, 1993). Several studies have shown that, if young children take part in suitable program, their social abilities can be significantly increased and they can learn to cope better (e.g., Forman, 1993).

Zippy's Friends is a program for kindergartens and primary schools (five- to seven-year-olds). It involves structured activities, which specifically focus upon developing social skills, and problem-solving abilities. It usually runs for 24 weeks, with one 45-minute session each week. The program is built around a set of six stories. Zippy is a stick insect and his friends are a group of young children, and the stories show them confronting issues that are familiar to young children—friendship, communication, feeling lonely, bullying, dealing with change and loss, and making a new start. The modules aim to improve children's abilities (1) to recognize difficult feelings and to identify coping strategies to deal with those feelings, (2) to communicate their feelings, (3) to make friends and to cope with rejection and loneliness, (4) to resolve conflicts, (5) to cope with change and loss, and finally, (6) to use a variety of coping strategies.

The program material was developed with an awareness of cost so that it can be available to the maximum number of children, regardless of their economic means and those of the school. High technology components have therefore been avoided. There is emphasis upon teacher training and support to ensure effective delivery of the program. Teachers selected for the program attend a training course on (1) the philosophy and theoretical basis of Zippy's Friends, (2) the concept of coping and its implications for the well-being of children, (3) how the program is structured, and (4) the rationale behind the various activities. Support is provided to teachers when they start to teach the program. They are encouraged to discuss each session with their colleagues, and can call the program co-coordinators for advice and assistance.

Evaluation

Zippy's Friends has been extensively and professionally evaluated in a variety of cultures. The main international study into the program's effectiveness was conducted in Denmark and Lithuania, testing the program in different languages, different grade levels and very different types of school environment. It concluded that Zippy's Friends had been successfully implemented in both Denmark and Lithuania, and found that children in both countries showed clear improvements in coping abilities and social skills. The program was equally effective with boys and girls (Mishara & Ystgaard, 2006). Another study in Lithuania showed that children who had taken part in Zippy's Friends in kindergarten adapted better to the more structured curriculum of primary school than those who had not taken part (Monkeviciené, Mishara, & Dufour, 2006). Further studies into the implementation and impact of Zippy's Friends are ongoing in Canada, Ireland and Norway.

By 2010 Zippy's Friends is running in kindergartens and schools in 16 countries, and more than 300,000 children participated in the program worldwide. Within Europe, the program runs in Denmark, England & Wales, France, Iceland, Ireland, Lithuania, The Netherlands, Norway and Poland. The program has been endorsed by the World Health Organization and national governments.

Papilio: Preventing Behavioral Disorders and Promoting Social-Emotional Competence in Preschool Children

Rationale and Program Components

Papilio is a well evaluated and theoretically funded prevention program which is now widely implemented in Germany (http://www.papilio.de/). Papilio (Scheithauer et al., 2008; Mayer, Heim, & Scheithauer, 2007) is a developmentally focused intervention program for preventing early-onset behavioral disorders and enhancing social-emotional competence in preschoolers. The main prevention goal is pursued (1) by reducing the impact of important risk factors for negative development and mental health (especially children's behavioral problems), (2) by fostering those factors that are believed to protect children from maladaptation and to foster their resilience, and (3) by helping children to complete important developmental tasks that are relevant at preschool age.

The Papilio program was developed as a universal intervention program because of the need for a classroom-based program that provided preschool teachers with the structure and materials to address preschool children's emotional and behavioral problems and promote their prosocial skills development in three- to six-year-old children.

The Papilio program includes a classroom-based curriculum and behavior management system, both of which are designed to enhance children's social skills, social-emotional competence and to reduce behavior problems. In the child-focused intervention, preschool teachers regularly implement three educational procedures that are mainly aimed at promoting children's social-emotional competence, group-oriented and prosocial behavior, and integration into their peer group. These procedures include (1) teaching sequences, for example, regarding emotion recognition, involving specific hand puppets; (2) relinquishing children's toys once per week to promote interactive activities between children; and (3) an adaptation of the "Good Behavior Game" (Kellam, Rebok, Ialongo, & Mayer, 1994). The preschool teacher component emphasizes positive reinforcement, appropriate use of negative consequences, clear communication and expectations, and strengthening of adult–child relations to support preschool teachers in their classroom management skills, and in their ability to interact and communicate positively with children.

Preschool teachers complete a five-day training workshop for the Papilio program, and spend four half-days on learning the practical implementation of the intervention in their classrooms. To assure the integrity of the intervention, teachers receive standardized materials comprising a manual detailing the program content, a manual presenting concrete instructions for implementing the intervention procedures, and additional materials for the child-focused intervention. Supervision meetings of teacher groups with the trainers also take place regularly. Thus, the program is implemented by means of a certified train-the-trainer system.

The parent-focused intervention consists of regular sessions at a preschool center in which teachers introduce parents to the educational procedures of child-focused intervention and support them in their educational skills.

Evaluation

The effectiveness of the program Papilio has been evaluated by means of a randomized controlled trial (the Augsburg Longitudinal Evaluation Study of the Program Papilio [ALEPP]) (Scheithauer et al., 2008) with three assessment phases and a sample of three- to six-year-olds ($n = 645$) receiving preschool education in Germany. This trial is part of ALEPP. In comparison to the control group, children in the intervention group showed a greater decrease in their overall problem behavior, a greater increase in prosocial behavior and better social-emotional skills as rated by their teachers. These positive changes were observed not only four months after the beginning of the program implementation, but also at the end of the one-year intervention period. In addition to the child outcomes, Papilio also showed positive effects for the teachers. Papilio preschool teachers report less stress, higher self-efficacy and job satisfaction.

Learning Stories: Promoting Children's Resiliency through Early Education

Rationale and Program Components

One of the very few systematically evaluated center-based prevention approaches in early childhood implemented in Europe is the program Learning Stories (http://www.dji.de/bildung-lerngeschichten). This program has originally been designed to improve the quality of early education in day care centers, but is also considered as a prevention strategy to promote children's resilience and thus to promote their mental health.

The method of structured observation and documentation of children's learning called Learning Stories was developed by Carr (2001) in New Zealand and adapted and further developed for use in German-speaking countries by the German Youth Institute (see Leu et al., 2007). The goal of the Learning Stories approach is to support the child in the development of a positive self-concept as being a "competent learner" and as an important member of the community. The approach involves children, teachers and parents and is directly integrated into the everyday practice of the educational setting. Educational principles are based on the question what promotes active learning and healthy psychological development of children in early childhood education and care settings. This approach not only affects teachers' understanding of education and their professional identity, and it also involves cooperation between the child care setting and the family. The foundation of this approach is the interplay between systematic observation, educational planning and reflection, and mutual exchange among all persons involved. These processes facilitate the provision of individual support and attention to children in social structures and raise the awareness of educators and parents of children's learning processes and competences. In sum, the program aims to promote children's resilience through active learning dialogues, promotion of children's self-efficacy beliefs (self as competent learner) and formation of positive educator–child relationships.

Evaluation

The Learning Stories approach has been adapted and evaluated for Germany (Leu et al., 2007). Twenty-five model institutions participated in this implementation and evaluation study. The evaluation included standardized assessments with day care center leaders and educators and parents as well as process evaluation methods such as group discussions and systematic documentations of the testing and implementation phases. The evaluation demonstrated a high satisfaction with the learning story approach, its implementation and its outcomes from the perspective of educators and parents. Learning Stories are now widely implemented in Germany. Until now, more than 240 child care centers in Germany adopted this approach.

In Switzerland, a large controlled intervention study is currently running at the Marie Meierhofer-Institut für das Kind (http://www.mmizuerich.ch/bildungsprojekt.html). This intervention study involves 12 intervention and 13 control (delayed intervention) child care centers in Switzerland. Among other goals, the study investigates the effectiveness of the

Learning Stories method as a measure to promote resilience in infants and toddlers (Simoni, 2008; Wustmann, 2004). It also includes a comparison between psychosocially at risk and psychosocially not at risk children in intervention child care centers and control child care centers. Standardized assessments with educators, parents and children themselves are conducted repeatedly.

CONCLUSION

As in most universal prevention approaches, mental health promotion in early and middle childhood is realized through the promotion of children's competences and strengthening resources. Whereas the home visitation programs support positive parenting and family support, center-oriented interventions tackle the following developmental areas: (1) promotion of social skills to prevent conducts problems, (2) promotion of coping strategies to prevent emotional problems and stress, and (3) promoting specific resilience factors (e.g., self-efficacy) to prevent adjustment problems in high-risk children. As all these programs are still in process, we so far cannot present final results of the scientific evaluation on program processes and efficacy. The heterogeneity of these programs provides us with the opportunity of comparing its efficacies with respect to the needs of different risk groups and community needs. Bringing these different approaches together in order to construct early prevention and intervention networks can open up more and broader perspectives on early child development and possible means to promote mental health in infancy and the preschool years.

NOTES

1. http://www.who.int/school_youth_health/en/.
2. CAPEDP research group: Prof. Antoine Guédeney (PI), Dr. Florence Tubach, Dr. Romain Dugravier, Hôpital Bichat Claude-Bernard, APHP, Paris. This work was supported by a research grant from the French Ministry of Health (PHRC AOM05056) and by the French Institute for Prevention and Health Education.

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Chapter 5

INFANT MENTAL HEALTH AND FEEDING DISORDERS FROM A PEDIATRIC PERSPECTIVE

Marguerite Dunitz-Scheer and Peter Scheer

A child's ability to master the developmental milestones necessary to ensure health and growth by oral intake is organized by an inborn pattern of genetic information. This innate programming is responsible for the individual coordination of physiological, motor, neurological, sensory and psychological issues involved in feeding (Stevenson & Allaire, 1991). Social motivation, taste, smell and the appearance of food are the main external stimuli affecting a child's drive for seeking food (Birch & Fisher, 1995; Harris, 1997).

The possibility to see, smell, taste, and touch food, the ability to coordinate motor skills and sensory inputs by sucking, biting, chewing, and swallowing, and the inborn pattern of prosocial behavior are core variables of feeding. They influence every child's pattern of state regulation and progression toward learning to eat. Thus, feeding is an activity by which genetic information is expressed by a multitude of predetermined features affecting all adults and all children involved in feeding; these aspects combine with environmental and cultural influences and are transferred from one generation to the next.

It is uncommon to find feeding disorders as specific reason for medical referral that result from medical factors alone. Any acute medical sources of the problem will usually demand immediate attention and specific intervention. The more frequent role of the physician is to help prevent feeding disorders develop in the first place and—once existent—prevent the pursuit of unnecessary examinations and ensure effective therapeutic intervention (Satter, 1995).

A feeding problem is, by definition, a difficulty between a person intending to feed or performing the act of feeding with a *to-be-fed* person. Any feeding situation in infancy involves the child and another person; it is interactive and is a meeting point of at least two personalities, two sets of minds, two sets of internal representations of what feeding is or should be, thus of two cultures. The definition of "at least two" makes feeding in itself a challenging and complex part of human behavior that has evolved over millions of years of development. Thus, when looking at feeding more carefully, especially with the aim of trying to understand and help individuals with feeding problems, we find a fascinating mix of a variety of influencing variables. Basically, feeding always involves the thinking and feeling of the adult as expressed in his or her feeding behavior as well as the world of actions and reactions of the infant involved.

When highlighting the medical perspective in feeding problems, it is important to understand that there is no exclusively medical problem which will not also influence the child's development and surrounding care giving system and at the same time there cannot be any primarily purely maladaptive psychosocial situation that will not eventually result in major medical problems as, for example, in the case of failure to thrive, severe malnutrition or other potentially life threatening conditions. Therefore, although this chapter will address the topic from a purely medical perspective, the reader is advised to bear in mind the complex interplay of interactions between physical, developmental, and psychodynamic variables.

THE ROLE OF THE PEDIATRICIAN OR ANY MEDICAL PROFESSIONAL

In any encounter of a feeding problem with the medical world, the role of the "third party" is mostly attributed to the pediatrician or *a* specialist of *another* medical discipline. This will *therefore be and become* a triadic situation (Frascarolo, 2009) in which the medical professional can have four main positions:

being an observer and advocate of the child on all functional levels including its physical findings **and decide on** further investigations

being a cooperative partner to the parent involved by listening to their opinions and observations

trying to keep at an equally distant position between both partners of the feeding situation, which may involve interpreting and explaining the interests of one to the other and vice versa. This might involve the parent feeling supported or not.

keeping out of the parent–child dyad, because it might be good to keep at a necessary distance from both the adult and the baby (thus forming a triad) so as to offer guidance and recommendations that can be made and accepted; it is also helpful to get the father into this supportive but noninvolved position

The pediatric profession is itself characterized by always having to deal with at least two parties involved whenever there are encounters with a child that is not old enough to present by himself or herself. It is therefore necessary to find a comfortable position between the adult and child perspectives. Nevertheless, the pediatrician is clearly responsible for the physical well-being of the child and for investigating all physical causes that might affect the child's capacity to feed. The physician's goal is to *ensure* that information arising from medical observations and investigations is appropriately integrated into the child's overall pattern of presenting symptoms. No symptom can be dissected from its functional level when dealing with feeding.

Of course the medical person in charge will need to make his decision depending on the specific setting he is working in and the specific quality of encounter with every child individually and its family. A child brought with feeding problems who is in a life threatening condition will always demand emergency treatment first.

WAIT, WATCH, AND WONDER

Within the setting of the specialist feeding clinic, the physician's best choice at the time of the first encounter might be the motto of Selma Fraiberg (1918–1981): “wait, watch, and wonder.” To observe and listen actively might be the most effective initial intervention for the physician dealing with feeding problems. Homework asking parents to make a nutritional diary might ease the presenting feeding problem greatly. Since a referred child has usually been experiencing the presenting feeding problems for months, the decision to recommend two weeks of reducing pressure and document oral intake will hardly impose a medical risk and might well be a first step toward solving the problem. The solution for most feeding problems might just be time, trust, and patience.

TIME, DEVELOPMENT, AND GROWTH: AN ANALYSIS OF INFLUENCING VARIABLES

The intake of nutrition is crucial for growth. Brain maturation and development are dependent on sufficient caloric intake and healthy nutrition. But growth is also a process dependent on time. Growth can neither be condensed nor stretched in time. Growth needs time. The first years of life are a period of extensive growth; it is because of this that the majority of medical referrals deal with the topic of infants and toddlers not eating enough (not meeting their nutritional goals, whoever defined them). In some cases the diagnosis of being born "small for date" will cause pressure on the parents from the moment the child is born. When problems arise, external pressure can become so strong that child protection services might be involved. Aversive processes, such as force-feeding, lead to the child developing refined mechanisms to fight against the intrusive or even abusive way of being fed.

The idea of increasing the oral intake of a baby by increasing the external pressure onto the feeding system is unrealistic and wrong (except for cases of neglect and deprivation) but not uncommon (promoted by Benoit & Coolbear, 1998). We lately published an article in the same journal that opposes Benoit's idea (Trabi et al., 2010). Inappropriate expectations expressed by relatives and bystanders outside the mother–child dyad are one of the most frequent sources of stress, which again can have a deleterious impact on the child's feeding. The requirement to produce an "ideal" growth chart for every child is responsible for much suffering and seems especially unfair, since the medical histories of the affected children often are not at all typical ones.

The expectation of an accelerated growth trajectory often hits infants who are survivors of intensive care medicine and are just starting to develop an autoregulated life outside the hospital. A vicious circle may then develop between the medical team, the parents and the child, which is typical in driving early feeding disorders. The task of the physician is to play an encouraging role in encounters with a child with feeding difficulties and at the same time keep a watchful eye on the possibility of rare and real medical issues involved.

Failure to Thrive

Failure to thrive (FTT) is subdivided in the literature into the nonorganic failure to thrive (NFTT) and organic failure to thrive (OFTT). It can but does not necessarily present with a feeding problem. FTT is defined as a child having too little weight for height. Typical reasons for OFTT are, for example, celiac disease, severe reflux, any tumor, neurodegenerative disorders, and metabolic disorders. Typical reasons for NFTT are infants with primary (regulatory disorders) or reactive feeding problems (attachment problem, infantile anorexia), resulting in not being able to increase their oral intake to support their developmental demand.

Children with Specific Syndromes or Disorders

There are many reasons why children may not follow their expected growth trajectories like infants with chromosomal anomalies, inborn syndromes, or any growth affecting problem such as, for example, Wolff-Hirschhorn syndrome (WHS), Silver Russel syndrome (SRS), or Pierre Robin syndrome. They demand genetic diagnosis and effective treatment of the behavioral aspects of disordered feeding if existent.

Children with Feeding Problems

Children with feeding problems (infantile feeding disorder, or IFD) tend to be frail, weigh too little, and be fussy, choosy, and picky. Their weight will often fall on the low side of growth percentiles. Feeding problems are detected by mothers, families, nurses, and doctors. Independent of the child's general development, growth might not follow the expected course. This again might result in more pressure, which will increase the child's functional symptoms, such as food refusal, gagging, retching, and vomiting, and increase his or her active avoidance behavior.

THE IMPACT OF GROWTH DATA AND NUTRITIONAL PROTOCOLS

A child does not need to "catch up" with growth: unless there are severe behavioral or medical problems (see previous section), growth will usually be predictable according to a genetic program. Furthermore, children do not gain weight constantly and at equal pace during the first three years of life (Largo, 2005). The curve of the percentile is an artificial representation of hundreds of tiny ups and downs.

Things to look out for include weight stagnation: except for the phase when the child starts walking (which can make the weight chart stay even for up to two to three months) an infant should not lose weight (unless by a clearly definable physical illness) and should at most show stagnation for the duration of one to two months.

The recommended average caloric intake in milliliters (ml) can be estimated with a simple formula: kilograms (kg) body weight divided by 0.7. The recommended daily intake of noncaloric fluids (water) is about half of this—unless the child suffers from insufficient kidney function or any other reason of increased loss as having a fever, diarrhea or vomiting—is about half of this. A child of 5 kg will need about 700 ml of caloric formula (0.7 cal/ml, resulting in an energy quotient of at least 100) and should be recommended to drink about 250–350 ml of water. Any concerns about insufficient growth must be expressed very carefully, so as not to do more harm than good. Since percentiles represent the statistical mean of any population, an individual child must be placed into the statistical "norm" with caution. It must be expected that any physician specialized in feeding disorders will encounter more infants with reduced body weights than the age-matched normal distribution shows and must take care not to expect unrealistic developmental changes.

Medical assessment based on the physical examination and the parent's narrative pediatric evaluation will include a complete and thorough examination, including inspection of the mouth. The child needs to be weighed and the weight needs to be set into context with its age, length or height, and head circumference. Inspection of the skin, nails and hair must be undertaken in order to determine nutritional status. Blood and urine tests should be performed by indication. Details of digestive patterns and history of feeding or eating must also be included.

The role of the physician in feeding problems of young children is to be the manager in charge of the child's diagnostic assessment. He or she should define all additional examinations for further evaluation and should perform and coordinate the necessary communication with the nonmedical team. Being a physician in the community or in an interdisciplinary team of a feeding clinic will provide many encounters with families and their infants suffering from feeding problems. In most cases the family will not be prepared to be referred for any kind of further developmental or psychological exploration or paramedical treatment without first being able to trust the leading physician completely. Even in feeding problems with a clearly recognizable behavioral origin, the fear of possibly missing a specific physical problem is great. This situation is often responsible for consuming much time and effort to obtain sufficient help.

Thus, any feeding problem of a young child—even more so as in adolescence or adulthood—suggests a holistic approach and analysis of the physical and developmental identity of the patient. A physician in the role of a family doctor might be able to do this more easily than a specialist for radiology, pediatric gastroenterology or ear-nose-throat (ENT) specialist. Nevertheless, the position of medical manager for each case must be recruited independently of the physician's position in the medical hierarchy or defined field of specialization.

In cases where the child is in pain or showing signs of malnutrition or when neurological symptoms are prominent, the physician will follow a clear diagnostic regime. The clinical finding of severe FTT in the absence of specific imbalances of the feeding interaction itself always demands ruling out the existence of chromosomal abnormalities, problems of the endocrine system, damage to the central nervous system and brain or any mayor organ systems as heart, lungs, gut or kidneys as source and origin of the child's ability to grow normally. Thus, the physician is guided by his clinical experience and diagnostic impression of the presenting symptom—here the feeding problem as core symptom—before planning further examinations and interventions (Harris, 1997; Wolke, Skuse, & Sheena, 2006).

OBSERVATION OF FEEDING FROM THE MEDICAL PERSPECTIVE

The observation of one or more than one feeding situation is of paramount importance for the medical professional. In case of a presenting feeding problem, it must be considered a mistake to suggest any further medical investigation or evaluation without having observed at least one feeding scene. The situation could be compared to prescribing an antibiotic in suspect of treating pneumonia without performing an auscultation of the chest or an X-ray of the lungs. While the behavioral monitoring of the child's feeding tends to be undertaken by the psychologist or behavioral specialist, it is extremely beneficial for the pediatrician or any medical doctor to be able to observe, either directly or indirectly through video recordings, and to have the opportunity to discuss events with the multidisciplinary team, all of whom will have their different professional perspectives and contributions to make.

Essential first steps in the Feeding Clinic

The need to observe the child's feeding before doing anything else. A physical examination must also be performed with special attention for teeth, hair, nails, and skin.

The need for a quantitative analysis of age, weight, height, and average caloric intake. This will offer valuable information for planning further diagnostic interventions.

The need to look at the quality of the child's intake and ensure a mixed and balanced intake of carbohydrates, proteins, fats, minerals, trace elements and vitamins.

The need to differentiate these facts from the parental perspective. The severity of a child's feeding problem can but must not correlate with its perception.

The need to establish a network with various professionals involved with patients with feeding problems, such as psychologists, speech therapists, and many more.

Medical assessment must follow a reproducible hypothesis about how a specific presenting symptom can be interpreted, evaluated and measured. It will aim to prove the existence of a medical origin of the feeding problem by "hard facts" with current medical and technical means. The analysis of blood values, hormonal status, growth assessment, ultrasound, pH-metry and esophageal manometry, videolaryngoscopy, endoscopy and gastroscopy are the most frequently recommended and common examinations in the workup of early feeding problems. The challenge is when to decide to need to do what: the medical task is to be as selective as possible and at the same time as specific as necessary. The parents need time to tell their story and to share their ideas about the child's medical history. However, it is important that this is not done in front of the child (with the exception of a baby sleeping); this part of the workup should only happen with the parents alone or, if unavoidable, the child should be engaged by someone else in play while the parents get a chance to talk.

Some infants presenting with feeding problems are referred for medical evaluation without having suffered from any prior medical problems. In this case the feeding problem will be their first encounter with the medical world and special attention and diligence must be taken to understand the problem and ensure effective assessment and treatment. Many other infants will have been patients of neonatal, antenatal or postpartum encounters with the medical world and will have their specific and individual story and medical history. This group of "survivors" of high-tech medicine is a special risk group for developing feeding problems, because any psychological stress on the baby or its caregivers might present as the origin for developing a feeding problem in a phase when the emergency interventions are over.

It must be remembered that parents of infants treated in NICUs can be traumatized, with long-term emotional effects (Benoit, Zeanah, & Barton, 1989). Thus, since feeding is a part of interpersonal experience, it is possible that this could become a never ending story and source of projections, associations and fantasies about what the baby might have gone through. This mechanism, in turn, may be responsible for the parents assigning a causal connection between the babies' neonatal phase or a phase of surgical intervention (as after cardiac interventions) and later occurring feeding problems. The physician will be advised to have an interdisciplinary team to cover the wide range of methods necessary for the specific diagnostic assessment of the child and its caregivers. This will extend from psychological support for a parent to planning a videolaryngoscopy in the case of dysphagia. In both cases he or she will depend on experienced colleagues: the result of a swallow examination performed with a screaming child cannot be utilized and the result of the same examination done with a cooperative child will only be reliable if the radiologist has sufficient regular experience of this kind.

ASSESSMENT AND DIAGNOSTIC CLASSIFICATION FROM A MEDICAL PERSPECTIVE

A classification system of the most common symptoms of feeding disorders is needed in order to identify and differentiate the major differences between types of feeding problems (Hofacker & Papouék, 1998; Levy et al., 2008; Scheer, Dunitz-Scheer, Schein, & Wilken, 2003). Existing diagnostic classifications offer only “catch-all” categories, such as “feeding disorder in early childhood” (ICD-10; F 98.2). DSM IV-R offers no specific acknowledgment for infantile feeding disorders. Current diagnostic systems fail to classify the range of frequent feeding problems in infancy and early childhood but are, thankfully, under review. The only classification system offering a spectrum of feeding disorders is the DC 0–3R, with six options of subclassifications which all cover common feeding problems of the first year of life. The DC 0–3R is compatible with DSM IV-R, also defines five axes of clinical interest (specific feeding problem, relationship pattern, medical condition, psychosocial stressors and the child functional emotional developmental level). It was developed and published in 1994, revised in 2005, and has currently been translated into 16 languages. The following descriptions are personal and shortened adaptations of the original DC 0–3 R categories. For clinical assessment and routine use of the DC 0–3R classification system the use of the published diagnostic criteria is recommended.

Feeding Disorder of State Regulation

The presentation of a very young baby—mostly within the first two months of life—with this disorder is extremely specific.

ANNA

It was clear that Anna wanted to feed. She was restless and hungry but would only suck for about three or four seconds, then wrench her head from her mother’s breast and start screaming. Her feeding consisted of this behavior repeated over and over again. Anna’s weight gain was poor and both mother and baby were exhausted. She was described as being irritable, with poor sleep, and was almost never calm, happy, and relaxed. Feeding was reported to have never worked since birth, and the problem had become worse with time.

The physician is advised to observe feeding and actively refrain from organizing any further examinations. Since the feeding problems mirror the child's general difficulties in state regulation this fact needs to be addressed. Every kind of medical examination will affect the situation negatively and potentially harm the child. Treatment must commence immediately and will show success once the baby is supported in learning how to regulate and organize its states. The feeding problem will be solved as part of the coaching directed to the overall problem of state regulation. Physiotherapists with specific training will be of great help. The main role of physiotherapy will be to check the child's physical positioning in feeding or eating situations and to ensure good muscular support of all muscles involved in eating posture. This may result in positioning an infant in a new high chair or on the contrary not letting a disabled child be fed in a sitting position but recommending feeding while lying supine on its back. Since parents might misinterpret the child's difficulties and symptoms as being purposely directed against them, the situation holds a risk for child abuse and immediate intervention and effective help are crucial.

Feeding Disorder Associated with Attachment Problems

If infants present with a feeding disorder between the age of two to five months, one must think of the possibility of an underlying attachment issue between mother and child. This must not necessarily be an overt postpartum depression, it may also present as a nondramatic lack of pleasure and primary feeling of love, ease of handling and affection. In many cases the psychosocial support system of the mother–child dyad is missing and no compensatory network is available. The infants present as being lazy and lacking energy in drinking, unfortunately mostly breastfeeding has been stopped. In these cases the question of support by the infant's father or a social network is crucial and in most cases interaction guided psychotherapeutic counseling of the mother will be necessary.

Infantile Anorexia

This category is described as a characteristic feeding problem starting to become dramatic around the child developing its own identity, showing willpower and mostly affects very bright infants around the age of six to eight months. Much literature on this phenomenon has been offered by Irene Chatoor (Chatoor, 1989; Chatoor, Hirsch, Ganiban, Persinger & Hamburger, 1998; Chatoor, Ganiban, Hirsch, Borman-Spurrell & Mrazek, 2000; Chatoor, Ganiban, Surles & Doussard-Roosevelt, 2004). The result of the bargaining and struggle for autonomy on the child's side and the mothers need for more control is pictured with a specific and characteristic kink in the child's weight chart after the age of six months.

Sensory Food Aversions

Drooling, gagging, coughing, and choking are symptoms of dysphagia and impaired swallow function. They are frequent in children with sensory awareness problems, global developmental delay, infantile larynx, tracheomalacia, paralysis of the vocal cords, or dysfunction of the epiglottis and are specifically symptomatic for lesions of the brain. They are seen in infants who suffered from severe intra- or peripartal asphyxia, intraventricular hemorrhages, inborn chromosomal aberrations, and other syndromes associated with impaired motor coordination, difficulties in adjusting their muscular tone to anticipated situations and also show impaired development of mirror neurons. Children suffering from a pervasive developmental disorder (PDD) could also be integrated in this group and need a highly specific and intensive therapeutic program to guide them to develop sufficient self-feeding skills. These infants will all need a highly specialized diagnostic assessment of the swallow function thus assessing suspected aspirations or, in case of aspiration, they will need a recommendation to administer a gastrostomy as soon as possible. This category has been defined as specific for the presence of neurosensory and sensory awareness deficits in the context of feeding problems.

There are four main groups involved:

1. Physically healthy children who suffer from a pathologic oral sensory reaction to tastes, food textures, and smells as seen in children with PDD, childhood autism, and Down syndrome. These children hardly react to the offering of food, they often do not seem to understand the concept of feeding, will not imitate adults or feed dolls, and show no playful feeding on a symbolic level.
2. Children with a clear developmental and/or neurological impairment whose impact on sucking and swallowing have often been neglected until the feeding disorder is detected. Sucking might have been possible but the beginning of feeding mushy foods and solids will mostly be the time of presentation. Since eating development goes along with all fine and gross motor development, there is often esophageal reflux involved. Pathology associated with neurological and sensory impairment will become symptomatic as soon as food volumes are increased or chewing is necessary.
3. Picky eaters: Mostly they are of normal development and intelligence, showing oral oversensitivity with very distinctive taste and texture

preferences and a restricted list of accepted foods. Sometimes their habits seem to suggest the need for inappropriate attention of one caregiver but mostly they will exhibit this highly selective behavior in all social groups and situations. A nutritional analysis and an estimation of social benefit versus social disadvantage are necessary to decide if and which treatment will be needed.

4. Mixed oral sensory perception and awareness problems, which are symptoms of motor deficits in swallow function, developmental delay, and possibly are symptoms of neurodegenerative diseases.

This category of children will need specific analysis and evaluation of the sucking and swallow function and coordination. Speech therapists will be of great help and should work together with the radiologist and ENT specialist to determine the best possible and safest way of feeding each affected child. For children suffering from PDD, a psychologist specialized on developmental and communicational issues in this field should be involved into treatment planning.

FEEDING DISORDER ASSOCIATED WITH A CONCURRENT MEDICAL CONDITION

Any underlying medical condition can affect the child’s appetite, motivation and sense of exploration in a negative way; this can happen during a phase of illness and possibly also after physical recovery. This counts for children who suffer from any kind of severe underlying medical condition like bronchopulmonary dysplasia (the most frequent problem of the lungs resulting from premature birth and are the respiratory problems as side effects of assisted ventilation), other lung impairments, immune suppression after organ transplantation, impairment of kidney function, severe skin affections, burn injuries, and so on. If children have been through months of earlier hospitalizations, any cue of avoidance at the sight of food can be respected as a positive signal of their luckily growing sense of self-determination and recovery into normal life. Nevertheless, when poor appetite has led to weight stagnation or even a considerable weight loss, children must be told clearly that their body needs food to recover. Sufficient food might be the most important medication for the weakened body. Some children will catch up easily but children who have been on the low weight side before even falling ill might need nutritional supplements or even temporary tube feed. Temporary tube feeding (by gastrostomy if the duration of severe illness is expected to extend two months) with coached tube weaning is definitely the better choice than weeks of nagging, urging, pushing and producing a secondary or chronic feeding or eating disorder.

All feeding problems associated with a clear medical condition are classified by this diagnostic category. Whereas this subgroup was originally reserved for post–medical episode feeding problems as can often be found after choking episodes, severe gastrointestinal infections, mouth infections, and so on, we also need to include children with feeding troubles after extreme prematurity, in association with organ transplants and oncological disorders, cardiac, pulmonary, renal and hepatic insufficiency or any rare metabolic disorders demanding a very bad-tasting specific diet.

In all cases of an existing medical condition it is the task of the medical manager to distinguish parameters caused by the underlying illness or its specific treatment or point out that the main problem seems to be growing behavioral conflicts of feeding due to its basically positive medical progress. The psychologist will be the physician's closest partner in this challenge.

FEEDING DISORDER ASSOCIATED WITH INSULTS TO THE GASTROINTESTINAL TRACT

A child who will eagerly eat about one-third of the expected portion but then start to scream and suddenly become unhappy could suffer from reflux. Gut disorders can occur after any kind of medical problems affecting tongue, mouth, larynx, esophagus, stomach, duodenum, and anal region. Investigations will all show positive findings in any kind of specific reflux assessment but symptoms will rarely react to medication alone if the core conflict of the feeding disorder is not addressed in the treatment plan. The most common problems of this group occur in children who have had surgery of cleft palates, esophageal atresia, duodenal stenosis, anal surgery, and so on.

RARE MEDICAL CONDITIONS

A child who starts to feed but very soon becomes very pale and appears to be nearly shocked, with increased heart rate and sweating may suffer from a dumping syndrome. Dumping syndrome is a shocklike reaction of the child provoked from too fast emptying of the stomach into the duodenum, which is commonly caused either by too fast tube feeding of too large volumes in a too short a time period, or mainly due to an insufficiency of the pylorus. This rare but very impressive clinical presentation is sometimes a medically induced problem, because too big quantities of tube feed are prescribed, or the localization of the tube ending is too close to the pylorus, thus promoting the feed too quickly into the duodenum.

A number of conditions with feeding difficulties have a genetic basis. It might not be detected by the existence of FTT but will show more discrete symptoms like dysmormic features or discrete neurological deficiencies affecting swallowing. The genetic malformation can have anatomical, neurosensory, or hormonal dysbalances that can be responsible for difficulties in feeding. A retrospective analysis of formerly exclusively tube fed children with chromosomal anomalies who could be weaned with no problem suggests that the impact on the parents is mostly responsible for the feeding problem more than the neurological or anatomical situation.

Posttraumatic feeding disorder as a diagnostic entity should be considered after choking experiences and repeated oral traumas, or as seen when feeding is performed by excessively traumatized parents. The more quickly the child and parents are supported to get over the situation emotionally, the easier the problem will be solved.

Tube dependency should be classified as its own diagnostic category. Tube dependency is defined as unintended prolongation of tube feeding, be this by nasogastric or gastrostomy tube, when the period of expected duration of tube feeding has been exceeded and learning to eat is impaired by the presence of the tube and not by any kind of medical problem. The diagnostic features and characteristics on the infant's side have been described and recognized, whereas the addictive patterns of emotional dependence and their behavioral appearance on the caregiver's side are still neglected in these cases (Dunitz-Scheer, Scheer, Kvas, & Macari, 1996; Dunitz-Scheer et al., 2009).

Medical Conditions Commonly Associated with Feeding Problems

The list of medical problems presenting primarily with a feeding problem include all medical diagnosis affecting physical well-being, reflux, unsafe swallowing, constipation, extreme prematurity, brain dysfunction, children with lung, renal or cardiac problems and children with syndromes of unclear origin. Finding the correct diagnosis is crucial, since most cases will have a good prognosis, if treated early and specifically. We differentiate between the following:

chromosomal anomalies demanding immediate surgical intervention (604, 605) These are the codes of the diagnostic subclassification groups that are offered in DC 0–3 R
metabolic diseases needing immediate identification and specific treatment (605)
malabsorption and other gastrointestinal problems with or without infections (606)

functional problems: as in children with extreme prematurity, regulatory disorders, gastroesophageal reflux, air trapping and constipation

neurological, neurodegenerative disorders and sensory dysfunctions affecting taste detection, food preference or the ability of safe swallowing (604,605, 606)

very rare medical conditions causing reduction of appetite with wasting, for example, anemia and other rare blood disorders, an undetected brain tumor or undiagnosed primary renal insufficiency

Reflux as Medical Illness

Gastroesophageal reflux is a mainly constitutional and functional problem by which swallowed liquids move against the rules of gravity induced by a retrograde movement of the esophagus. The symptom is physiological in small infants and induced by an insufficiency of the diaphragmatic muscle tone and even more impressive if food is given before the baby sleeps or even reclines. Esophageal inflammation, retching, aspiration, and food aversion could be induced by reflux. When observed (by spitting out sour smelling food even minutes to hours after being fed, or by recurrent pulmonary infections) exact diagnostic assessment is important and—once proven—can be cured sometimes by change of feeding habits and post-feeding handling as well as PPI medication, which reduces the production of acid in the stomach. Regular evaluation of pharmacological treatment is crucial because PPIs reduce appetite and the ability to digest protein. Before surgical steps are taken (such as, for example, a fundoplicatio with or without placing a gastrostomy)diagnosis should be clear using 24-hour monitoring of esophageal pressure (manometry) impedance metry followed by esophageal-gastro duodenal endoscopy.

Late Gastric Emptying

Fluids are transported quicker than solids. In rare cases, the passage through the stomach exceeds 15 minutes, which can be caused by a hypertrophic pyloric sphincter or malrotation of the stomach. Suspected late gastric emptying as reason for a feeding problem is extremely rare and always demands confirmation and specific treatment by a team of experts.

Milk Protein and Other Food Allergies

Some infants show an inability or difficulty to get along with traditional baby formula. Before drastic changes are made, a critical medical assessment should confirm or out rule any food intolerance. The impact of economics and advertisement must be acknowledged critically and specific diets and formulas should only be given with a clear medical indication.

Constipation

One of the most obvious and common causes of reduced appetite and insufficient weight gain is nothing else than irregular movement of the bowels or constipation, often in combination with frequent changes of formulas. The lack of fats, fibers, and sufficient liquids is responsible for this misbalance and need to be corrected to insure regular and painless bowel movements. There are strong hints that a tendency to be constipated is genetically induced as it runs in families. In these cases regular treatment will withhold long-lasting suffering.

SURGICAL AND PHARMACEUTICAL OPTIONS OF TREATMENT

The most common surgical interventions include fundoplication, surgery of a diaphragmatic hernia and placement of a gastrostomy. All these interventions need to be clearly and specifically indicated from a medical point of view and should not be performed if the underlying specific diagnosis has not been confirmed by prior findings and examinations including pH-metry, impedance metry, barium swallow X-ray, videofluoroscopy, and sometimes gastro duodenal endoscopy.

Centers dealing with children with feeding disorders must seek to set up a network with their colleagues from the departments of child surgery, radiology, gastroenterology, ENT, and many more. Appetite stimulation drugs are not available at all and thus are not recommended. The decision to set an end to recurrent vomiting by operating a fundoplicatio must be discussed very carefully because it also sets an end to the ability to vomit and when, for example, vomiting is protecting the child from being overfed, retching and nausea will be the result of the operation.

CASE VIGNETTE

Session 1

Shirley, 15 months, is brought to the clinic for the sixth time. She has not gained weight for the past six months. Prior to that she was a completely healthy, well thriving, fully breast-fed baby with excellent development at all levels. Her mother reports that she never took to solids offered by spoon and never enjoyed food from a jar and this is why breast-feeding was continued. The percentile shows good weight gain for the first seven months of life, all growth parameters were on the 50th percentile. Between the age of eight months and now, her weight has leveled out flatly, she went through some infections of the upper airways, but generally her motor development has been within the normal range and she is sitting, standing and walking by herself. On this occasion of seeing Shirley, she has a fever and has stopped eating and drinking for nearly two days. Shirley shows weight stagnation for six months. Her weight has fallen to the third percentile; her length has also slowed down and is currently on the 25th. Nevertheless, she still looks well and active but refuses to drink anything, or even to breast-feed. Fortunately her nappies have still been wet.

Medical examination reveals a sore throat and some blisters on the tongue, suggesting that Shirley is suffering from an acute viral mouth infection which explains the current symptoms. This can be handled easily. But it is also obvious that this is not the full extent of the problem. She has clearly developed FTT even though the situation from a medical point of view is not yet dramatic.

Shirley is given medication to reduce the fever and to relieve the pain in her mouth and her mother is asked to bring her back for a check up and "feeding session" in three days. The mother is asked not to offer Shirley any food three hours prior to the next scheduled session.

Session 2

Shirley has recovered, the fever is gone and she has started to ask to be breast-fed again. Her mother is asked to provide and feed her some baby food. The feeding scene has not even begun when Shirley is screaming at the top of her voice while her mother is nervously searching for the right spoon. It is obvious that Shirley does not want to be fed. The conflict is apparent; Shirley seems quite a strong personality, she is not willing to accept what her mother wants her to do and her mother seems exhausted and desperate. She turns to the pediatrician and says: "See that, this is exactly what it's been for six months now!"

There are three potential courses of action from this point:

1. A solely medical intervention would include a blood count, thyroid and growth hormones, referral to a specialist for gastroenterology and also possibly for abdominal ultrasound.
2. A parent-focused psychological intervention might focus on Shirley's mother's long story of stress. This might reduce some emotional stress but will not change the quality of the feeding problem.
3. Specific counseling by an experienced pediatrician or general medical consultant will clearly recognize the conflict of interests and will explain that any bright child at the age of 15 months needs more autonomy and wants to do things by itself.

It was advised that Shirley should proceed to finger food and needs to catch up with self-feeding skills. Mom should actively refrain from continuing feeding by spoon and should not offer any mushy food. This will take some time. Mom and Shirley should return in two weeks and Mom should write an intake diary, documenting everything her child eats or drinks. Shirley should be allowed to have two baths a day in lukewarm water with no soap added and play with some toys in the water. For the rest of the day, toys should be removed and replaced by two to three doll dishes with small amounts of snacks. Shirley should invite children to play, organize picnics with her dolls and should "help" her mom in the kitchen. For the time being breast-feeding should be reduced to falling asleep times and when waking up during the night. The only person from whom Shirley's mother most probably will accept advice is her pediatrician. The probability of success with this kind of medical attention, taking nor more than 10 minutes, is high! Unfortunately, the probability of the condition of FTT continuing is even higher, thus risking more stress for the caregiver and clearly includes a higher risk of developing a severe growth problem if the feeding problem is not solved soon.

The outcome of this vignette was good and simple. Three brief checkups followed after the first assessment and the child could be recommended to reassume its normal medical checkups at the local physician.

SUMMARY

Since any of the medical problems mentioned in this chapter could become apparent exclusively by the split criterion of "nothing but" a feeding problem, the observation of an actual feeding situation is crucial and must always be performed before any further investigations are made. It will last no more than 10 minutes, should be performed by an experienced observer and—in the rare case of detecting an underlying medical problem—will mostly show discomfort, dysphagia, pain or the absence of behavioral symptoms like primary visual food refusal and active food avoidance. In all cases of a nonbehavioral origin of the feeding problem, the underlying medical problem will need to be diagnosed as fast and as accurately as possible. Treatment must be effective and should be evaluated, since the development of consecutive FTT should be avoided. Secondary behavioral symptoms including parental overinvolvement and anxiety are common in feeding disorders of medical or nonmedical origin. A medical checkup includes a developmental assessment of the infant's motor abilities associated with eating and self-feeding patterns. A new condition defined as tube dependency will be dealt with in a later chapter, since it may develop as an unintended side effect after long-term tube feeding after any reason. Tube dependency should be recognized as a tragic outcome of non resolved feeding problems and is in itself a serious condition with a high risk of the development of secondary problems.

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Chapter 6

EARLY ATTACHMENT-BASED INTERVENTIONS

Karl Heinz Brisch

The prevention of emotional disorders by means of secure attachment to a specific attachment figure provides a major foundation for the healthy motor, cognitive, and emotional development of children. It is therefore crucial to foster secure development in children and to prevent early attachment disorders because such disorders are associated with developmental lags, including serious disorders in motor and cognitive skills, and with a lack of empathy in children. Children with attachment disorders show serious deficits in their ability to enter into and structure attachment relationships. Such children often behave aggressively in conflicts and have a hard time empathizing with the emotional needs, thoughts, and intentions of others. This can lead to considerable misunderstandings and problems in day-to-day interactions, which may manifest in difficulties in personal relationships during adolescence and adulthood (Becker-Stoll, 2002; Zimmermann et al., 1997). Attachment disorders demonstrate a certain persistence and cannot be resolved without fresh experiences of secure emotional attachment or therapeutic intervention. Rather, they tend to become reinforced and clinical experience indicates that parents may transmit their own poor attachment patterns to their children (Brisch, 2002). Primary prevention of attachment disorders is therefore essential to promoting emotional stability.

PRIMARY PREVENTION OF ATTACHMENT DISORDERS BY MEANS OF THE SAFE PROGRAM: SAFE ATTACHMENT FORMATION FOR EDUCATORS (SAFE®)

A primary goal of prevention should be to foster psychological health in parents and children. The development of a secure attachment pattern is a fundamental goal that is associated with considerable advantages for the development of the child. Children who have a secure attachment pattern are better able to solicit help in emergency situations and have more and better friendly relationships. They also used more nuanced coping strategies in that they have available a greater palette of approaches involving emotional availability to others. Children with a secure attachment are more creative, persistent, and nuanced in their cognitive functions. Their memories are better, as is their ability to learn. They resolve conflicts more constructively and cooperatively, and show less aggressive behavior in conflict situations. Speech develops more smoothly in small children and with fewer problems (Dieter, Walter, & Brisch, 2005; Klann-Delius, 2002). All of these positive effects are delayed or problematic in children with attachment disorders; in fact such children are considerably more subject to psychopathological problems in all of these developmental areas (Brisch, 2002, 2007; Minde, 2003; Zeanah & Emde, 1994). The goal of any prevention program should therefore consist in sensitizing parents to the emotional needs and signals of their children. Sensitive parents who are emotionally open to their children's signals foster the development of secure attachment in their children. However, parents who themselves suffer from attachment disorders are less able to recognize their children's needs and signals, frequently interpret these signals incorrectly, and end up promoting insecure attachment in their children. If in addition the parents traumatize their children by using physical, emotional, or sexual violence, a variety of disordered attachment patterns may result (Brisch, 2002). A prevention program should therefore help parents to practice sensitive interaction behavior, while at the same time sensitizing them to their children's signals by using video feedback. Videotaped parent–child interactions have been shown to be a particularly effective instrument for enabling parents to become more sensitive to these signals, and to interpret them better (Grossmann, Grossmann, Spangler, Suess, & Unzner, 1985; Kindler & Grossmann, 1997). Clinical experience has shown that parents who have not yet worked through their own traumatic experiences tend to use their children as a projective screen when prior trauma is triggered by their child's behavior. In such situations, parents may reenact their own traumatic experiences with their children, thereby recruiting them as unwitting actors in an old play. These are precisely the classical situations in which parents reexperience sometimes violent affects as a result of the reactivation of old trauma and then—unconsciously—make their children the victims of physical, emotional, or sexual abuse. And these are precisely the behaviors that lead to attachment disorders in children. The result is a vicious circle of traumatic experiences that are transmitted from the parents to their children; we can, in fact, diagnose attachment disorders resulting from trauma across generations. One might be tempted to assume that such transmission of developmental disorders is genetic; however, family histories show that the "family story" has generally been marked by generations of violence and insensitive behavior on the part of parents toward their children (Brisch, 2003a, 2003b, 2003c, 2003d, 2004).

Target Group for Preventing Attachment Disorders

Fathers and mothers are the target group for preventing emotional developmental disorders. Parents to be, both first-timers and more experienced couples, should be encouraged to participate in primary prevention programs so that they may be guided from the outset to be more sensitive to the needs of their child, both emotionally and cognitively. All the parents need to bring to these sessions is receptiveness to the emotional development of their child and the motivation to take advantage of the support offered by a preventive program. Clinical experience indicates that during a pregnancy parents tend to be particularly involved with traumatic experiences from their own childhood. Positive attachment experiences as well as traumatic ones in their relationship with their own parents are reactivated from memory, and affective memories of happiness, anger, rage, and disappointment often bubble close to the surface during pregnancy. As they turn over in their minds the sorts of roles they hope to assume in their infant's life, they often consider whether they want to be like their own parents—or not.

Pregnancy is a time when the dynamics of their own childhood make parents especially motivated and receptive to dealing again with their own experiences. Once the infant is on the scene, the parents are busy with the dynamics taking place in the present such as feeding, diapering, and the baby's sleep patterns, so that these positive and/or painful experiences from the past again retreat into the background or vanish completely from consciousness. During the postnatal phase and the first year, parents often need additional help because of the many questions that arise only when they are confronted with the concrete reality of their infant. In our psychosomatic outpatient service, we frequently see parents only after difficulties with feeding, sleeping, and relation building have already taken hold and become somewhat chronic. This may manifest in a baby that cries many hours a day over several weeks and cannot be soothed. Often, the parents come to us only after they can no longer cope psychologically. In order to stave off such outcomes early all in, and to offer assistance to parents as soon as they experience their first coping difficulties, a prevention program should ideally be in able to support parents and their infant during the first year of life in the postnatal adaptation phase.

Contents Covered in the SAFE® Program

The SAFE® program "Safe Attachment Formation for Educators" was developed specifically to foster the development of secure attachment patterns between parents and children, and to prevent attachment disorders, particularly the transmission of traumatic patterns across generations. This is why the program came to be called SAFE®, a word that implies that development should be safe for both parents and children. Parents are informed of and solicited into new SAFE® groups by flyers placed in pharmacies, doctors' offices (gynecologists, pediatricians), family education and counseling centers, pregnancy counseling centers, and by press reports. There are a number of different financing models, depending on the location of the SAFE® group, and who the organizers are. In part, SAFE® groups are organized and sponsored by family education and pregnancy counseling centers, but may also be financed by contributions so that the parents themselves only pay a small portion of the actual cost. Sometimes the groups are organized by established midwives or psychotherapists who receive fees directly from the parents. In general, the groups are led by a facilitator and cofacilitator over the entire period from pregnancy to the end of the first year of life.

The SAFE® program consists of four modules: (1) a prenatal module (20th–32nd week of pregnancy) and a postnatal module (1st–12th month after birth) with group intervention; (2) video-feedback sensitivity training; (3) a hotline (for crisis intervention); and (4) individual trauma psychotherapy (for traumatized parents).

Parents meet in parent groups in both the prenatal and postnatal modules. Groups with parents who are in similar phases of pregnancy provide an important framework for the entire program over time. Group cohesion develops over the duration of the course, from the 20th week of pregnancy to the end of the first year of life. Parents make use of individual trauma therapy and the hotline as needed. This means that SAFE® combines group therapy and individual therapy in a single prevention program.

SAFE®: Prenatal Module with Group Intervention

In the prenatal module, the parent groups meet on four Sundays during the pregnancy, beginning on about the 20th week of pregnancy, and continuing on the 24th, 28th, and 32nd week of pregnancy. The program begins at a very early stage, at a time during which ultrasound diagnosis of malformations has been performed, and the viability of the pregnancy is no longer in question. Sundays have generally been found to be excellent days for the course because the parents tend to be relaxed, and the father in particular is more motivated to join in. In the prenatal module facilitators convey certain necessary information, and the parents and facilitators exchange experiences among themselves. Subjects discussed may include the competencies of the infant and the parents, parental expectations of the "ideal" baby, the ideal mother, the ideal father, parental fantasies and fears, the prenatal development of attachment, and parent-infant interaction. These are illustrated using videotaped examples, and the parents are trained in how to perceive and correctly interpret a baby's signals. This training enables parents to get their first experience—in videotaped form—with specific tasks such as feeding, nursing, diapering, playing, and dialoguing between parent and child, and to attune themselves emotionally to their infant's signals. In the process, parental competencies and the ability of the infant to respond can be illustrated by short video sequences. The parents also learn stabilization and relaxation techniques from the very beginning of the course so that they may better handle stressful situations during the pregnancy and after the birth. Research has shown that fears and stress during pregnancy can have a negative effect on the mother to be in terms of her ability to become attached to her infant, and on the infant himself and his irritability and tolerance for stress. The parents can use the stabilization and relaxation techniques that they learned prenatally after the birth when they encounter stressful situations with their infant, which occur sooner or later in all parent–child relationships. However, as long as the baby is still being nourished in the mother's womb, the parents have more time and emotional space to learn such relaxation techniques. Once the baby is there and making demands on them day and night, they often lack the inner peace to do so.

SAFE®: Postnatal Module with Group Intervention

After the birth, the parent groups continue with six full-day Sunday seminars held on the 1st, 2nd, 3rd, 6th, 9th, and 12th month. This means that the parents are supported during this difficult phase of postnatal child development and adaptation, and get help in reorganizing their relationship to take into account this new third person. The cohesion of the group is particularly beneficial during the postnatal phase because all of the parents are undergoing a similar developmental process. Individual parents may meet outside of group sessions to exchange experiences, and to do things together. This leads to the formation of parent peer groups, which even before the birth has been shown to have a stabilizing effect on the parents. This positive effect continues to grow after the birth. The postnatal groups deal largely with working through the birth experience, which is not always associated with positive feelings. In some cases the baby had to be delivered prematurely or by Caesarean section; in either case, more intensive psychotherapy individually may be necessary so that the parent–child relationship does not develop in an atmosphere of anxiety and fear. Unprocessed birthing experiences can have a negative effect on parent–child interactions and attachment. Postnatal depression, which, according to longitudinal studies, afflicts 12%–15% of all mothers, could perhaps be prevented as well by timely group psychotherapy. Further key contents covered after the birth include parental competencies; triangulation between the mother, father, and child; interactional difficulties with feeding, nursing, and sleeping; and the building of an emotional relationship. The parents bring their babies to the meetings so that the attachment behavior of the parents and infant and the baby's exploratory behavior may be observed directly in the group. All of the parents learn a great deal from these interactions.

Video-Feedback Sensitivity Training

During this time, the parents and their infant are videotaped in interactions involving diapering, feeding, nursing, and play. These video sequences are then discussed with both the mother and the father in individual feedback training sessions. The goal is to enable the parents, based on actual experience, to learn to recognize their baby's individual signals, to interpret them correctly, and to respond to them appropriately and promptly. Irritation and the parents' emotional difficulties and misinterpretations and projections from their own childhood can be recognized in a timely manner at this stage. They can then be discussed and dealt with. If the parents consent, their individual videotaped interactions with their baby may be used in the group as feedback training for all participants. The parents are generally highly motivated to share their interactions with the group so that everyone can learn from their own positive experiences, and so that others in the group can give them tips for dealing with difficulties in fine attunement or "misunderstandings" in the interaction. Given that relationships based on trust have developed among group members over time, parents have little difficulty openly discussing their anxieties, fears, and interactional difficulties.

Hotline

Another intervention module is the "hotline." After birth in particular, all adaptation processes such as going to sleep are typically subject to difficulties so that parents may for the first time get into trouble when they cannot put their baby to sleep or when he cries for hours on end without their being able to soothe him, or to figure out what the problem is (Brisch, 2007). Clinical experience has shown that parents often seek out help much too late when they find themselves in such stressful situations. At worst, they come into the clinic only after they have responded violently to their crying infant. The hotline provides parents with the ability to call the SAFE® group facilitator, and to get advice and support immediately. It is an enormous advantage here if the parents already know the person answering the hotline from prenatal group meetings in which a relationship of trust has developed (Brisch, 2000). The frequency of hotline use by particular couples and couples overall varies considerably and fluctuates, depending on the particular crisis and stress situations, which are difficult to predict. Specific interventions can now be targeted with precision because the group facilitator knows the parents' individual histories and resources as well as their particular risk factors and problems from previous group meetings and the Adult Attachment Interview (AAI). In general, the parents' ability to perceive and interpret their baby's signals were recognized and increased prior to birth with the use of video training. This means that the parents' competencies and resources are well known from their diapering and feeding video recordings so that they can be rapidly referred for appropriate intervention and counseling when they call the hotline. If the parents are projecting their own unconscious fears and expectations onto their infant, and these projections are the cause of the interactional disorder, this can be recognized early on and treated in parent–infant therapy (Bakermans-Kranenburg, Juffer, & van IJzendoorm, 1998; Beebe, 2003; Bodeewes, 2002; Kohle, Hoch, Rautzenberg, & Jansen, 2001; Papoušek 2000; Schmücker et al., 2005; Zelenko & Benham, 2000).

Individual Trauma Therapy

An AAI is conducted with all parents. The specific purpose of this interview is to determine what attachment resources the parents to be have, and what traumatic experiences that they have perhaps not yet resolved may intrude into their relationship with their children. Experience has shown that approximately 30% of parents have such unresolved traumatic experiences that require individual psychotherapy. These unresolved traumatic experiences are particularly important because clinical experience indicates that children can—completely unintentionally—by their behavior reawaken old traumatic experiences and associated affects in their parents. These are like "ghosts in the nursery" (Fraiberg, Adelson, & Shapiro, 1975) that come completely unbidden. For example, a child's crying, desire for tenderness, tantrums, or even demands for closeness and contact may bring unresolved traumatic experiences bubbling to the surface. If this occurs unchecked and unconsciously, a parent may suddenly find himself or herself in a full-pitched battle on an imaginary stage. In the worst case scenario, the child may become both an actor and victim in an old traumatic script, assigned a role that she never sought. The child may then become a target and projective surface for violent fantasies, which at worst can result in real repetition of violent experiences in that the mother or father unintentionally shakes the child. Such often brief traumatic reenactments can have fatal consequences or leave the child handicapped or damaged as a result of bleeding in the brain or eye from shaking trauma. If the attachment interview shows that the parents are bringing such unprocessed traumatic experiences into the present, they are informed that these experiences represent a certain risk factor to the extent that they have not yet been worked through. They need to know that events will likely occur in which they may well repeat their own traumatic experiences in their relationship with their child, thereby setting in motion a vicious circle in which the violence they themselves experienced is transmitted to the next generation. One specific goal of the SAFE® program is to break this vicious circle. If the parents can be motivated and are ready, we offer them separate individual trauma therapy sessions during the pregnancy to help stabilize them. After the birth, the parents may be helped to work through their traumatic experiences in individual trauma-centered psychotherapy using modern techniques such as EMDR. This part of the SAFE® program in particular aims at preventing parents from repeating with their own children the trauma they themselves experienced.

The goal of the SAFE® program overall is to ensure that as many children of parents who participated in the SAFE® group show evidence of secure attachment patterns after the first year of life, and that the parents' traumatic experiences are not repeated with their infants.

SAFE® Mentor Training

Persons who wish to facilitate a SAFE® group may be trained as SAFE® mentors at the Dr. von Hauner Children's Hospital in Munich (for further information, see www.safe-program.org). Regional training centers are planned for the future. All professionals who work with pregnant women, parents, and their infants may apply for SAFE® mentor training. These include pregnancy counselors, midwives and nursing counselors, nurses, obstetricians, psychologists, pediatricians, pediatric and adolescent psychotherapists, speech trainers and therapists, and others. What is crucial for work in SAFE® groups is the ability to engage with pregnant women, parents, and parents with infants, and to bring "hands-on" experience to the group from daily professional practice. The mentor training is conducted in three full-day seminars and additional practice days that may vary in length and intensiveness, depending on prior practical experience. The mentors then organize SAFE® groups in their localities under their specific working conditions. The work is preferably done by a pair of mentors or cofacilitators. This leadership model makes it possible for one mentor to convey content, while the other monitors group dynamics and leads the group.

Evaluation of and Research on the SAFE® Program

The SAFE® program and the contents it covers were successfully modeled in the pilot phase. A prospective, randomized, longitudinal study is currently underway, in which SAFE® group intervention is compared to conventional pregnancy and birth counseling and assistance with nursing. The control group meets for the same amount of time and at the same frequency as the SAFE® group so that the differences between the intervention models can be studied. The control group also contains parents who meet for full-day seminars on Sundays during the same time period up to the end of the first year of life. Mother-child and father-child interactions are evaluated in both the SAFE® group and the control group using video recordings of diapering, feeding, and playing, and the quality of infant attachment is studied and evaluated at the end of the first year of life. In addition, questionnaires are used to obtain prenatal and postnatal data, and all parents are given an AAI. Physiological stress parameters in both the mothers and fathers are determined by means of saliva cortisol tests before and after the interviews, and in the infants before and after attachment quality testing.

Summary

The primary preventive goal of the SAFE® program is to support and help as many parents as possible to build secure attachment with their infants in that the assistance parents find in the SAFE® program can help them to perceive and respond more sensitively to their children's signals in spite of their own painful or traumatic experiences. The SAFE® program begins during pregnancy and continues through the end of the first year of life. It makes use of both group interventions as well as individual psychotherapeutic counseling and trauma-centered psychotherapy. This approach combines the strengths of group and individual counseling and therapy. Parents can break the vicious cycles of the trauma and even violence that they themselves experienced by taking part in individual trauma-centered psychotherapy. The hotline offers parents a day-to-day safety valve for interactional difficulties and enables them to contact competent mentors quickly when emergencies arise. Optimally, these mentors are in a position to respond more quickly to parental calls for help because they are already familiar with their histories. The SAFE® program is open to all parents, both mothers and fathers, and to single parents. It is not offered only to so-called at-risk parents with known psychosocial risk factors, because clinical experience has shown that traumatized parents are found in all socioeconomic strata. Parents from the middle and upper classes often find it particularly difficult to talk about traumatic experiences, or to trust another person. However, these parents run the same risk of reenacting and transmitting their own traumatic experiences to their children. This fundamental openness to all classes of parents on the part of the SAFE® program makes it possible to reach out to many social groups with different psychological problems and structures. Holding the parent seminars on Sunday makes it possible for fathers to participate in the SAFE® groups as well. Addressing the needs of parents early on during pregnancy, when all of them are dealing individually with their new roles as mothers, fathers, and parents, and the actual difficulties of caring for a real-life baby are not yet front and center seems to motivate them to participate in a SAFE® group. Involving the parents in a one-year group and individual preventive process increases the reliability of their engagement.

The SAFE® program should prove acceptable to many types of parents because no parent groups are stigmatized. If the mentors succeed in spreading the SAFE® model, it should be possible in the future to help a large number of children build secure emotional attachment to their parents, creating a significant foundation for their later social, emotional, and cognitive development (www.safe-program.org).

SECONDARY PREVENTION OF EMOTIONAL DISORDERS THROUGH THE BASE® PROGRAM: BABYWATCHING AGAINST AGGRESSION AND ANXIETY FOR SENSITIVITY AND EMPATHY

The goal of this prevention program is the secondary prevention of aggressive and fearful behavior disorders in three- to six-year-old and school-aged children by improving their sensitivity and empathy. Children whose ability to empathize is lacking or rudimentary tend to behave more aggressively toward their peers, and more frequently have an insecure attachment pattern (Parens, 1989, 1993; Suess, Grossmann, & Sroufe, 1992).

Children who developed an attachment disorder after suffering early trauma have a very hard time imagining the feelings and thoughts of others (Fonagy, 1998, 2003a, 2003b). The capacity to empathize and the development of self-reflection prevent children from responding hostilely or fearfully to others because they better understand their intentions and feelings. Children can learn to behave more cooperatively in preschool groups, be more prosocial and overall more creative and attentive; when this occurs, behavior disorders such as aggressiveness, inattention, hyperactivity, and oppositional behavior melt into the background.

Contents Covered in the BASE® Program

In this program, which is based on the work of Henri Parens (Parens & Kramer, 1993), a group of children observe a mother with her infant over a period of about one year. For many single children, this is the first and often only chance to observe milestones in a baby's development over the entire first year of life. The infant is only a few weeks old when the mother visits the children's group for the first time to be observed by preschoolers or school-aged children sitting in a circle. This type of participatory interactional observation can begin shortly after birth and continue to approximately the end of the first year of life or the beginning of the second year. It ends when the infant has begun to walk about and verbalize. Generally, the mother and her infant visit the preschoolers once a week, and each observation session lasts between 20 and 30 minutes. The children are guided in how to observe the mother and child and their interactions. A teacher generally leads the group, and another teacher guides the observation. A record is kept of the sessions. The teacher focuses on several levels of observation: Under the guidance of the teacher, the children describe what the mother actually does with her infant—the action level—what the infant does during the same time period, and how they affect each other in the process of interaction. The children then discuss possible motivations for the actions of the mother and infant. A third level of observation is the emotional level: the children are asked to empathize with the mother's and baby's emotions, and they answer questions about what might be going on emotionally with the mother and her baby in this or that particular interaction. The final stage of babywatching is the empathy stage. Here, the children answer questions about how they would feel, what they themselves would experience emotionally when, as a thought experiment, they fantasize themselves into the position of the mother or the baby.

Results of a Pilot Study

The behavioral problems of preschool children (*n* = 50) were analyzed before and one year after babywatching in a prospective, randomized design with a control group. Both the teachers and the parents filled out a number of different questionnaires, including the Child Behavior Checklist (CBCL) (Achenbach, 1991), which measures behavioral problems.

The results before the beginning and at the end of the intervention after one year of babywatching were compared with each other. The study showed significant differences between the control group and the intervention group after babywatching. Overall, positive effects were found in boys and girls in the intervention group in comparison with the control group. The positive changes related both to externalizing and internalizing disorders. In the opinion of the teachers and the parents, both the boys and the girls behaved less aggressively and showed greater attentiveness and less oppositional behavior after one year. In addition, positive changes were found for internalizing disorders, because both the boys and the girls were less fearful and depressed, were less apt to withdraw, and were more emotionally responsive in conflict situations. The girls (but not the boys) in the intervention group seemed, according to the teachers, had fewer physical complaints, and according to their parents they also had fewer sleep disorders. The parents and the teachers each assessed the changes positively. These changes were not found in the control group.

Summary

Babywatching was a positive emotional experience for all participants. We found that the children generalized the empathy gained from observing mothers and their infants to their play interactions and their interpretation of the behaviors of their playmates. This may explain the changes in observed behavior after one year. Babywatching is a cost-neutral, secondary preventive interaction with positive results for boys and girls, both in terms of externalizing and internalizing behavior disorders. These results are preliminary and will be tested in other evaluation studies with a randomized, prospective design. In particular, babywatching programs will be initiated in socially more labile settings in which a high proportion of preschool children have behavioral problems. In the future, babywatching will also be tested with different age groups, and introduced and studied in different settings (www.base-babywatching.de).

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Chapter 7

FAMILY THERAPY FOR FAMILIES WITH INFANTS

Kaija Puura

DEFINING A FAMILY

There are several definitions for the concept of family. Farlex Free dictionary first gives the word family a meaning of "a fundamental social group in society typically consisting of one or two parents and their children." Another definition of the word in the dictionary is "all the members of a household under one roof," without defining any biological kinship. In Western society there has been a tendency to regard the nuclear family consisting of two parents and their children as "normal" even though a large number of families do not fit the definition (Almqvist et al., 1999; Keller, 1971; Walsh, 1982). A classification of families by Schlesinger (1979) includes families with parents and children, childless couples, one parent families, adopted families, reconstituted families with divorced or widowed men and women remarrying, and communal families, which may consist of a group of families or a group of families with children and some single adults. In addition to this list, families today can consist of homosexual and lesbian couples with children, of grandparents and children, or of children only in child-headed households in countries where lots of children have been orphaned by wars or illness. What is common to all the types of families is caught in the definition by the North American sociologist Burgess (1926), who defined the family as dynamic system with interacting personalities.

FAMILY SYSTEM AND FAMILY THERAPY

After the time of the development of psychoanalysis and individual psychotherapy in 1890s to 1940s, family therapy was developed after the Second Word War on the idea of applying ideas from systems theory to psychiatry (Ackerman, 1966; Bateson, Jackson, Haley, & Weakland, 1956). In family system therapy a family is considered a system with a set of interrelated parts—the family members—forming a whole that is different from the sum of its parts. Changes in one individual affect the whole system, which in turn affects each of the individuals, thus the process is circular instead of being linear. With system thinking psychiatric symptoms and mental illnesses were seen as ongoing process that changed with time and the conditions of family adaptation (Ackerman, 1958). The major focus of treatment in family therapy is therefore mainly in what is happening in the family here and now, but as the parents' family of origin influences their behavior, three-generational work—either indirectly by drawing a family three or directly with involving grandparents in family sessions—is common.

In the family system parent–child interaction specifically affects the physiological and psychological development of the children (e.g., Schore, 2001, 2009). Children also learn their parent's view of the world, patterns of behavior, attitudes and beliefs during their childhood (Barker, 1992; Sameroff, 1995). In addition, the way siblings interact with each other also affects their psychological development (Jewsbury Conger, Conger, & Scaramella, 1997; Rutter & Redshaw, 1991). In most cases a family system provides positive, growth promoting experiences for both adults and children, but sometimes also negative and harmful experiences that may traumatize family members. Life events or illnesses affecting individual family members or the whole family may exceed the family system's capacity to adapt, and turn a well functioning family system into a negative and traumatizing family system (Cox & Pailey, 1997). In child psychiatry, and perhaps particularly in infant psychiatry, family system therapy can be a fitting therapeutic approach. The family interaction provides the developmental context for a child here and now, and helping parents to become more responsive and effective in parenting their children already in infancy may induce a long lasting improvement. When working with families with infants and children the therapist has to think about the developmental needs of the children, and by becoming part of the family system (second order cybernetics), to try to induce and strengthen such changes that promote the well-being of children without forgetting the needs of all the family members (Piha, 2004). In a bit similar manner as in dyadic interventions, in family therapy communication between family members, their roles, affective responsiveness and involvement with each other, their behavioral control and capacity for problem solving are assessed (Epstein, Bishop, & Levin, 1978). An example of recent development in family therapy for infant and toddlers is the Dynamic-Maturational Model (DDM; Crittenden & Dallos, 2009) that integrates family system theory and attachment theory. In the DDM attachment relationship classification is used for understanding interaction strategies and information processing between family members. The three topics to address in psychotherapy with families are the presenting problem, the underlying threat of survival, reproduction or survival of one's children, and finally the information processing that transforms the experienced threat to maladaptive behavior. Since each family member will frame the presenting problem differently and have a different personal history, creating understanding between family members may bring about positive, enduring changes.

INFANTS AND DYADIC PARENT–INFANT INTERACTION

Infants need interaction with at least one caregiver, here called the parent, to survive and to develop. The birth of an infant triggers a set of maternal behaviors in the mother, and already during the first days of life mother–infant communication functions as a mutually adaptive dyadic system (Lavelli & Fogel, 2005). During the first months of life a normally developed infant is capable of forming individual relationships with other possible caregivers and with other members belonging to the family, like siblings (Feldman & Eidelman, 2007). The importance of the early experiences of the interaction between an infant and the parent has particularly been recognized in shaping the cognitive, emotional, social, and moral development of an individual (Rosenblum, McDonough, Sameroff, & Muzik, 2008; Schore, 2009). These experiences where the parent reads the infant's cues or signals, understands and shares the infants arousal and affective states, and regulates them so that the level of stimulation is not too high or low are the basis of healthy psychological development of an individual. They also determine the quality of the attachment security between the parent and the child, which in turn affects the way the child will behave later in life in interaction with his or her spouse and children (Ainsworth, Blehar, Waters, & Wall, 1978; Lieberman, Padron, Van Horn, & Harris, 2005).

It has also long been acknowledged that there is a need to identify circumstances where early parent–infant interaction is at risk, and to intervene in order to maintain good-enough interaction and thus prevent mental health problems in infancy (Beebe, 2005; Galbally et al., 2006; Goodman, Broth, Hall, & Stowe, 2008). For this purpose researchers and clinicians have focused on studying and treating dyadic interactions, first between mothers and infants, and later between fathers and infants. Becoming a parent is a developmental challenge for an individual affecting practical life and involving changes in how particularly relationships are experienced. An infant requires constant caretaking, which more or less restricts what the parent or parents can do and when and may be felt as a loss of adult autonomy. Studies of the transition to parenthood have shown that new parents experience changes in the quality of relationships in their own family of origin, in their relationship with the other parent, in the level of life stress and social support, in their own well-being or distress and in the quality of relationship that each parent develops with the infant (Cowan & Cowan, 1995). Today there are several different treatment techniques and models for treating mother–infant interaction with evidence of its benefits to both mothers and infants (Galbally et al., 2006; Goodman et al., 2008; Schechter et al., 2006) and an increasing amount of reports on the benefits of supporting father–infant interaction (e.g., Cabrera, Shannon, & Tamis-LeMonda, 2007; Feldman, 2003; Fletcher, 2009). However, as becoming a parent changes so many aspects in life, in some circumstances treating only the dyadic parent–infant interaction may not be enough or feasible.

INFANTS IN FAMILIES WITH MULTIPLE CAREGIVERS

In families where more than one adult is committed to sustenance and upbringing of a child or children, the caregivers form a coparenting relationship (Van Egeren, 2004; McHale, 2007). The coparenting relationship is more than two dyadic relationships between an infant and each of the caregivers; it includes also the relationship between the adults. As stated before in this chapter, the development of an infant is thus shaped not only by dyadic interactions with the caregivers, hereby called the parents for simplicity, but also by relationship experiences with different combinations of family members interacting within the family system (Minuchin, 1985). As an example of this, Fivaz-Depeursinge and Corboz-Warnery (1999) have shown how parents interact with their infant in a different manner when they are alone with the infant (dyad) compared to when they are together with the infant (triad). Their results have also shown that infants from the age of three to four months are capable of interacting simultaneously with both parents, and that children under 12 months use their social skills for sustaining family homeostasis (Fivaz-Depeursinge, Favez, Lavanchy, de Noni, & Frascarolo, 2005; Fivaz-Depeursinge & Favez, 2006). The number of dyadic relationships in a family increases with increasing number of children (Emde, 1991), and the siblings also shape each others' development (Rao & Beidel, 2009).

Within a family it seems that particularly the quality of coparenting is important for the well-being of children. The quality of coparenting forms quite early between the parents and has been documented in families with infants as young as three months of age, showing marked stability through time (McHale, 2007). Coherent and warm, mutually supportive coparenting has been shown to correlate with better mental health and social skills in the offspring, whereas coparental antagonism and lack of mutuality and cohesion has been tied to high frequencies of aggressive behavior and emotional problems (McHale & Rasmussen, 1998; Schoppe, Mangelsdorf, & Frosch, 2001; Schoppe-Sullivan, Mangelsdorf, Frosch, & McHale, 2004; Schoppe-Sullivan, Weldon, Cook, David, & Buckley, 2009).

Not surprisingly the quality of the coparenting relationship is affected by individual characteristics of both parents and their interpersonal relationship, and to some extent by the characteristics of the infant. Pessimistic prenatal expectations and representations of either parent of how parenting and family life will be after the baby is born are linked with less coherent coparenting (Carneiro, Corboz-Warnery, & Fivaz-Depeursinge, 2006). Marked or continuing marital distress makes parents behave more antagonistically in their coparenting interactions, and their family interactions are characterized by low levels of warmth, cohesion, and harmony (McHale, 1995; McHale, Johnson, & Sinclair, 1999; McHale et al., 2004). An infant whose care is demanding either because of illness or difficult temperament may make coparenting less coherent and mutually supportive if the marital relationship has been difficult prior to the birth of the child (Favez et al., 2006). Like parental behavior in parent–infant interaction, coparenting is also affected by both parents' previous experiences of being parented in their family of origin, and of the quality of their previous attachment relationships. Becoming a parent activates memories of received parenting (Fraiberg, Adelson, & Shapiro, 1975), and for many couples the features of the other as a parent may come as a surprise, particularly if the couple has not shared much of their childhood experiences with each other. Grandparents also get activated in their parenting by the birth of a grandchild, and their involvement in the caretaking of the grandchild may affect the marital relationship and coparenting positively or negatively, or both (McHale, 2007).

Finally, in a family system problems or illnesses of one family member affect the experiences and well-being of other family members (Schmitt, Piha, et al., 2008; Schmitt, Santalahti, et al., 2008). Health problems in either parent affect their marital relationship, the coparenting relationship and the way children can relate to the ill parent. When one parent is not well the other is forced to take care of the infant and possible other children partly or totally alone, which in turn increases the amount of parenting stress. Severe illness of a child may have the same effect, if parents are not able to share the strain caused by worrying for the child, participating in the care of the ill child and taking care of the other children in the family. In these situations working with only one dyad may not be enough for finding out how to help all the members in the family.

TREATING INFANT FAMILIES WITH DYADIC AND FAMILY THERAPY: THE TAMPERE MODEL

Up to now the majority of clinicians and researchers working with infants have chosen to assess and treat the dyadic interaction between a parent and an infant. Some clinicians have pointed out the necessity to consider and treat the marital relationship (Barrows, 2004), to assess and treat the whole family together (Favez, Frascarolo, & Fivaz-Depeursinge, 2009) and to integrate family system theory and attachment theory into a treatment model (Crittenden & Dallos, 2009). The current knowledge on the multiple factors affecting the development of an infant certainly has increased the need to rethink assessment and treatment of mental health problems in infancy (Sameroff, 2006). In the Department of Child Psychiatry in Tampere University Hospital we have developed a treatment model, where different forms of family therapeutic interventions can be used in connection with dyadic parent–infant psychotherapy when needed. This is in line with our clinical philosophy called integrative child psychiatry developed under the leadership of Professor Tuula Tamminen. It means looking at a child's situation using several informants: the child, parents, and significant others, and utilizing several theories for integrating the information and creating understanding for choosing optimal treatment. The ultimate goal is always to improve the situation for the child or children so that healthy development is possible, and improve the situation also for the parents so that they can succeed in their parenting.

Prior to any treatment we make an assessment of the family system, marital relationship, parent–infant relationship and attachment and of the infant characteristics. The methods we use include family interviews, observations of parents interacting with their infant or children, observation and individual assessment of the infant, and questionnaires. Sometimes significant others like grandparents or other caregivers take are also asked to participate. The focus of the main problem determines the "port of entry" (Sameroff, 2004; Stern, 1995). If the main problem is in the parent–infant interaction of one parent, the therapist will start working with that parent–infant dyad. The focus of the treatment is the parent–infant relationship, not the infant nor the parent as individuals. The goal is to help the parent–infant dyad cooperate better in every day life, and so increase its mutual adaptive capacity (Mäntymaa, 2006). On the parent's side this means helping him or her to detect, understand and respond to the infant's needs appropriately and at the right time, for example, to sensitize the parent to the infant's needs. This in turn helps the infant to regulate his emotional and physiological states, and promotes his skills and capacity for initiating and sustaining interaction with the parent, both for learning purposes and for using the relationship as a secure base. The method the therapist uses in our treatment model is a multilevel approach working on the experiences, feelings and thoughts of the parent while the parent is interacting with the infant in a free situation, usually at their own home. The therapist also openly wonders about what is happening in the interaction, bringing the infant's behavior and needs into the discussion with the parent. If problems concerning coparenting or marital relationship arise, the other parent is asked to attend a family session lead by a family therapist where these issues can be discussed between the parents. After the family session the dyadic therapy continues, and family sessions are arranged when needed.

For families where the main concern is in coparenting or marital relationship, we choose a systemic family treatment in forms of family-centered treatment or family therapy as the first intervention. Family-centered treatment is also needed in families with many children where both parents struggle with their parenting. The treatment can include sessions with the whole family or just the parents and the infant, or just the couple. Even when the treatment sessions involve only the marital or coparenting couple, the focus of the treatment is changing the family situation to better meet the needs of the children; this often naturally follows the positive changes achieved in the marital relationship or coparenting. In families where parenting and coparenting are particularly challenging, we can take the whole family in to the family day ward for an intensive treatment period. Depending on the nature of the problem seen in the family interaction the length of the day ward treatment can vary from two days to three weeks. In the family day ward a nurse and a family therapist pair work with the family, guiding the parents in real-life situations to interact with their children in more coherent, warm and efficient way. In cases where one parent is experiencing more difficulties with the infant, systemic family treatment is continued with dyadic parent–infant treatment, or both interventions are used in parallel. In this model the parent–infant dyad is seen weekly and whole family sessions are arranged every fourth to sixth week.

Similarly for infants and toddlers diagnosed with an illness affecting their development or behavior, family therapy is offered as the first choice. In the family therapy the parents' thoughts and feelings concerning their child and the family situation are listened to for building a therapeutic relationship. Parents are also given education on child development and of the specific features of the child's illness. For some parents this may suffice to give them insight on how to change their interaction with the child to reduce problems (Sameroff, McDonough, & Rosenblum, 2004). Usually parents need more help, particularly if the child is diagnosed with an autism spectrum disorder, attention deficit disorder, mood disorder or has severe problems of self-regulating behavior. Family therapy sessions focusing on how parents can practice sensitive, coherent coparenting in the presence of the child's disorder are then continued. Behavioral-cognitive techniques can also be used within family sessions to teach parents ways of managing difficult situations with the child.

In families with multiple risk factors parenting is often overburdened by parental mental health and substance abuse problems, low social support, unemployment and poverty (Zeanah & Smyke, 2008). These families again need support in many levels: in managing their daily life, parents' own health, child care, and relationships between family members. With these families networking with other services like social services, community health services, services for substance abusers, and adult psychiatric services is necessary. The first task is to assess what services are primary to make sure that the needs of the children are adequately met. This can mean, for example, organizing day care for the children to allow the parents to rest, or organizing treatment of either or both of the parents. The aim is to create some stability and predictability to the life of the family. When this is achieved, parents may be able to engage in working on their parenting. For multirisk families we most often choose home-based, family-centered approach with focus on attachment and parent–child interactions, combined with intermittent treatment periods in the day ward and continuing support from social services.

HOW THIS WORKS: A CLINICAL VIGNETTE OF JOSEPH

Joseph was referred to Infant and Family Psychiatric Unit at the age of six months for almost constant crying and eating problems. In the first interview it was revealed that Joseph's mother was depressed and felt that motherhood was too difficult for her. Joseph's father practically took care of Joseph alone whenever he was at home, and was enjoying it to a great deal. However, the father felt stressed because he had his job and Joseph to take care of, and he was also worried for his wife. In the dyadic assessment the mother was very didactic while interacting with her son, and there was clear lack of positive emotion. Father–infant interaction was more smooth and joyful. With the mother Joseph was passive and withdrawn, with the father he appeared quite normal. Because the mother had problems in the interaction with Joseph and was distressed for that, it was agreed that the therapist assigned to the family first started weekly visits with the mother and Joseph. It soon became obvious that the feeding situations were anxiety provoking for both mother and son, and needed more intensive intervention. The parents agreed upon a period on the family day ward, with the goal of making the feeding less stressful. The father participated in the inpatient treatment on two days a week, while mother came to the day ward with Joseph on all weekdays for three weeks. After practicing feeding supported by the therapist and a family ward nurse, the feeding problems subsided and the mother–infant therapy continued. Even though the mother seemed to enjoy her interaction with Joseph, she told the therapist how dissatisfied she was with her life, and with her husband. We offered the family a systemic consultation (Frascarolo-Moutinot & Favez, 2009) with the Lausanne Trilogue Play method. In the triadic assessment it became obvious that the parents were both very child centered and tense with each other. In the couple discussion the experienced loss of love and intimacy between husband and wife came out. The parents agreed to series of family therapy sessions with focus on their marital relationship, during which the mother–infant interaction was supported by monthly home visits by the initial dyadic therapist.

CONCLUSION

Treating parent–infant interaction in dyadic treatment is of great value in many circumstances and may be necessary for building up a secure relationship between the parent and the infant as well as between the therapist and the parent. However, as illustrated with the clinical case, it may not be enough for helping with problems in marital or other close relationships the parent may have. Working on the family system level with infant families has many benefits, most importantly it gives all the family members the opportunity to create a joint understanding of what kind their problems are and how they can solve them. The therapist has an important role as a supporter and facilitator of the family negotiation in a holding environment (Fivaz-Depeursinge, Corboz-Warnery, & Keren, 2004). With families with infants and toddlers, the therapist also helps to get their voices and needs heard—whether they are spoken in words or nonverbally. In our experience dyadic treatment and systemic family treatment can be, and in some cases should be, combined for an effective intervention benefiting the whole family.

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Chapter 8

THE MENTAL HEALTH OF AUSTRALIAN ABORIGINAL CHILDREN AND ADOLESCENTS: CURRENT STATUS AND FUTURE PROSPECTS

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and the WAACHS team

Less than 20 years ago the mental health status of the Australian population was mostly unknown. Prior to 1992 few if any population-based studies had been undertaken with the specific aim of assessing the mental health status of Australians. A few regional studies prior to this time had examined child and adolescent mental health (Connell, Irvine, & Rodney, 1982; Sawyer, Sarris, Baghurst, Cornish, & Kalucy, 1990), however, no studies had been undertaken to gather representative state or national samples of children, adolescents or, for that matter, adults, in order to establish the prevalence and burden of mental health disorders in the Australian population.

In the passage of less than 20 years this has all changed. Several population-based studies of Australian child, adolescent and adult mental health have been conducted (Andrews, Hall, Tesson, & Henderson, 1999; Jablensky et al., 1999; Sawyer et al., 2001; Silburn et al., 1996; Slade et al., 2009; Zubrick et al., 1995; Zubrick et al., 1997).

They confirm many of our greatest concerns about the immediate and long-term burden that mental health disorders impose on individuals, families, and indeed whole nations (Murray & Lopez, 1996). These findings have also been made available at a time when we have increasing evidence to guide both clinical and population level interventions for promoting mental health, and preventing and treating mental health disorders (Commonwealth Department of Health and Aged Care, 2000; Mrazek & Haggerty, 1994).

While these advances in knowledge were welcome and critical to the development of policies to better prevent, detect and treat mental illnesses in the Australian population, they were notable for the almost complete absence of any information about Australian Aboriginal adults, and they were entirely silent with respect to the mental health status of Aboriginal children.

This chapter describes the first large scale undertaking in Australia to estimate the mental health status of a representative sample of Australian Aboriginal and Torres Strait Islander children—referred to throughout as Aboriginal children. The Western Australian Aboriginal Child Health Survey (WAACHS) was a landmark event in bringing forth the first comprehensive information about the mental health status of Australian Aboriginal children (Silburn et al., 2006; Zubrick et al., 2004; Zubrick et al., 2006; Zubrick et al., 2005b). It was also pioneering in terms of demonstrating that it was methodologically *possible* to do a high quality epidemiological survey of a small population with high levels of cultural variation and dispersed across one-third of the Australian continental land mass.

This chapter is organized in four parts. The first part details a short history of what was known about the mental health of Australian Aboriginal children prior to the WAACHS and outlines the steps that were taken to collect the first comprehensive profile of Aboriginal child mental health. Part two uses the WAACHS to detail the Australian Aboriginal circumstance, without which it is not possible to understand how to improve mental health outcomes in this population. Part three specifically details the prevalence and correlates of mental health problems in the Australian Aboriginal child population. Part four discusses the specific implications for human service sectors and communities wishing to treat and prevent issues and to promote mental health.

THE WESTERN AUSTRALIAN ABORIGINAL CHILD HEALTH SURVEY: A BRIEF HISTORY

Within Australia, the first systematic descriptions of Aboriginal mental health commenced in the 1960s and early 1970s (Cawte, 1964, 1974; Eastwell, 1977; Jones & Horne, 1972; Nurcombe, Bianchi, Money, & Cawte, 1970). These investigations were mostly of remote Aboriginal communities and tended to employ Western ethnographic and psychiatric conceptual frameworks to describe firstly the “traditional” mental health disorders unique to various Aboriginal cultures and the “transitional” disorders considered to arise from the impact of ongoing colonization on traditional culture, ties, lands and obligations. During the 1970s and 1980s there were few reports on the mental health of urban and country town Aboriginal communities and these, apart from some notable exceptions (Kamien, 1978), tended to focus on more general community problems such as domestic violence and alcohol abuse (Lickiss, 1975) and on specific incidents such as deaths in custody (Hunter, 1988). The studies of this period were characterized by a greater convergence of medical anthropology, psychiatry, cross-cultural psychology, and other social sciences in the consideration of broader contextual factors in understanding the nature and dynamics of adjustment to social and cultural change (Hunter, 1989). It was only 20 years ago that Radford et al. (1990), and Clayer and Divakaran-Brown (1991) provided the first description of the psychosocial circumstances of Aboriginal families in urban areas. Using a random sample of approximately 15% of Aboriginal households in the urban areas of Adelaide, Radford et al. (1990) employed multidisciplinary and participatory methodologies that addressed community defined mental health issues. While primarily focusing on adults, the findings provided a unique insight into historical, cultural and situational contexts of specific mental health problems such as stress and depression, exposure to destructive behaviors such as domestic violence and sexual abuse, deliberate self-harm and suicide.

At the beginning of the 1990s then, and in a decade that would see an explosion of new information about the mental health of non-Aboriginal Australians, was it possible to embark on a project that would seek to provide the first good quality information about the mental health of Australian Aboriginal children?

Because much of the new information coming forward in the 1990s about the mental health of Australian non-Aboriginal children was based epidemiological random sampling of households across urban, rural and remote regions of Australia, and, because the methods used entailed household surveys using high quality measures of mental health status, nothing less than a similar standard was desired for Australia's original peoples. This was a daunting prospect in the absence of any previous undertakings at this scale. This would be a "first" for Australia and needed to set the standard.

A Cautious Start

The assessment of the feasibility, design and scope of the Aboriginal Child Health Survey was undertaken over three years between 1996 and 1999. Survey methodology and instrumentation were developed in consultation with Aboriginal leaders, key Aboriginal bodies and through extensive community consultations throughout the state. Efforts were made to ensure that the data collected were both scientifically relevant and pertinent to government information needs and policy initiatives. To do this, reference groups were convened during 1997–1998 with representation from various state and Australian government departments and community agencies that had an interest in the outcome of the survey findings. The results from the consultations indicated that Aboriginal people viewed the prospect of a survey positively and placed a high priority on the information that it would gather. They also wanted the study to be under the direction of Aboriginal people and they wanted the study to "make a difference" to the Australian Aboriginal circumstance.

Aboriginal Direction

All phases of the survey and its development, design, and implementation were under the direction of the WAACHS Steering Committee. Established in 1997, the Steering Committee had the responsibility to control and maintain the cultural integrity of survey methods and processes; employment opportunities for Aboriginal people; data access issues and communication of the findings to the Aboriginal and general community; appropriate and respectful relations within the study team, with participants and communities, with stakeholders and funding agencies and with the governments of the day.

Indigenous Consultation

The survey represented the largest single population-based household survey of Aboriginal children living in their families ever undertaken in Australia. It involved extensive household sampling and voluntary participation in the survey of many Aboriginal and Torres Strait Islander people across Western Australia. Seeking support and approval for the survey required establishing an extensive and ongoing process of consultation. Repeated consultations were undertaken during 1998 and 1999 throughout the state of Western Australia. Every attempt was made to engage participation of community leaders, community councils, administration staff, service providers, and local residents in discussing their views about the need for the survey and to request their approval to be included in the survey. People were asked about the methods and processes that they felt would assist or hinder the success of the survey, their requirements with respect to specific survey content, their expectations about the use of the survey data and intended outcomes.

The initial community consultations for the survey established that most participating caregivers and youth expressed a preference for the survey to be written and administered in plain Standard Australian English (SAE). The precise wording of survey questions was kept as simple as possible to accommodate a wide range of proficiency in SAE and Aboriginal English. The survey materials presented in this format were assessed in the pilot and dress rehearsal and found to yield reliable and valid information for all but the most remote and culturally intact Aboriginal communities where there was a high level of traditional language use. In these communities, the majority of (but not all) families chose to be interviewed with the assistance of an Aboriginal language translator employed through the local community council or Aboriginal Medical Service.

Ethical Clearance

The survey met the requirements of, and was approved by, the Western Australian Department of Health's Aboriginal Health Information and Ethics Committee as well as the Ethics Committee of King Edward Memorial and Princess Margaret Hospitals.

The Size and Scope of the Survey

Western Australia comprises over one-third of the continental landmass of Australia. The northwest and center of the state includes large tracts of desert and some of the most remote and sparsely populated areas in the world. The more populated southwest of the state includes extensive agricultural and forested areas with numerous small population centers. Over two-thirds of the state's total population and one-third of the Aboriginal and Torres Strait Islander population resides in the metropolitan area of Perth. The Aboriginal population of Western Australia as of June 30, 2001, was estimated at 66,069 or 3.5% of the total Western Australia population. Of this, 29,817 people (45%) were aged under 18 years, representing 6% of the total Western Australia population for this age group.

The survey was based on area sampling of dwellings. Families in selected dwellings who reported that there were Aboriginal or Torres Strait Islander children or teenagers living at this address who were aged between 0 and 18 years were eligible to be in the survey. Where a selected household had a child temporarily living away from home (e.g., in a boarding school or hostel), these children were included in the scope of the survey. Once the authority for the survey and the nature of the survey was explained to a responsible adult (usually the caregiver(s) or head of the household), and consent to participate was obtained, indigenous status was determined for each person who was reported to "usually" live in the dwelling by asking, "Does (the person) consider himself or herself to be of Aboriginal or Torres Strait Islander descent?" Data were gathered on all Aboriginal and Torres Strait Islander children under the age of 18 in each of the participating households.

The diversity in both cultural and living circumstances that the survey content and interview processes would need to encompass is difficult to convey. Families with Aboriginal children who live in Perth, live in a modern, highly urban setting and their children principally attend local state, independent or church sponsored schools. They overwhelmingly and predominately speak English. In contrast, those Aboriginal families who live in extremely remote, discrete communities, may be living in communities that comprise less than 100 people and may be accommodated in shared community housing. Some Aboriginal families live in family or clan "outstations" away from even these small discrete communities. Such outstations comprise less than a dozen dwellings. Community facilities, physical infrastructure are often very poor or nonexistent and social and medical services are often sparse and discontinuous. Throughout these remote areas children attend local state-operated community schools or schools in the Catholic education sector where several grades are schooled in the same school, often in a single room, by a sole teacher. In these settings English may be a second or third language.

Survey Content

The survey was designed to place as low a burden on respondents as possible while at the same time acknowledging that sufficient time must be spent in gaining access, understanding and a good level of rapport with respondents. The interviews took considerable time, and multiple visits were often necessary to ensure complete data and to minimize respondent fatigue. Interviews were budgeted for a three-hour time period per household in which no more than 90 minutes would be used in formal data collection. Questionnaire content covered child and youth development; health and well-being; functional impairment and disability; use and access to health, education and social services; and a selected number of questions about diet. These data were collected from interviews with the caregivers in the household who were the most knowledgeable about the survey children. In addition to the information collected on children, separate interviews were undertaken with up to two caregivers per child to gather information about the demographic and social characteristics of the household and family and to ask questions about the dwelling, neighborhood and community. Consent was obtained from caregivers and young people to collect separate health and well-being information from young people aged 12–17 years.

A Pilot and a Dress Rehearsal

Prior to the dress rehearsal and main survey, a pilot survey was carried out in September and October 1999 and a full dress rehearsal was undertaken in April 2000. These permitted extensive modifications to survey content and process prior to the main survey.

The Main Survey

The main survey commenced in May 2000 and was completed in June 2002. Dwellings were selected for screening using an area-based clustered multistage sample design. From 166,290 dwellings in 761 Census collection districts, 139,000 dwellings were approached to determine if residents were eligible to participate in the survey. Using this method, a random sample of 2,386 families with 6,209 eligible children was identified throughout metropolitan, rural and remote regions of Western Australia. A total of 1,999 of these families (84%) with 5,513 eligible children consented to participate in the survey. Interviewers gathered useable data on 5,289 (96%) of these participating children. In addition to the data gathered on children, data were also gathered on families from: 2,113 (95%) participating caregivers identified as the persons who knew the most about the individual survey child; 1,040 (83%) other participating caregivers of the survey children wherever this was possible and wherever they were present in the household and 1,073 (73%) participating young people aged 12–17 years.

School Survey

From October 2000, the 3,419 survey children who were in school were followed up with survey instruments that collected details from the school principal and the classroom teacher. A total of 485 schools were sent survey materials and returns were received for about 2,379 (67%) children attending approximately 410 of these schools. Information was also gathered from school principals about the school's physical, social and community environment and about the capacity of the school to meet its educational mission.

Nonresponse and Refusal Characteristics

Nonresponse characteristics and methods for their adjustment are described extensively elsewhere (Zubrick et al., 2006; Zubrick et al., 2004). With respect to the 387 families who refused participation in the survey, analyses showed that families with older children were more likely to refuse participation. In the Perth region, household size and socioeconomic status were also significant predictors, with families refusing to participate more likely to live in large households and live in more disadvantaged areas. Within the South West and the Midwest and Goldfields regions, the only significant association was with older age of the child. In the Kimberley and Pilbara, household size was also a significant factor with nonrespondents more likely to come from large families. Because of these findings, age, region and household size are factors that have been incorporated into the weighting design.

Cost of the Main Survey

Much of the reluctance by Australian governments to embark on a survey of Australian Aboriginal children stemmed from the concern that such an enterprise would be too costly. The cost of the field work undertaken between May 2000 and June 2002 amounted to $1,035,000 Australian dollars. This is exclusive of the early preparatory work, piloting and dress rehearsal. The major costs were actually incurred *after* the survey data were collected and during the period from mid-2002 through 2006 for the publication of four archival volumes of findings detailing aspects of the physical health (Zubrick et al., 2004), mental health (Zubrick et al., 2005b), educational outcomes (Zubrick et al., 2006) and family and community well-being (Silburn et al., 2006) of Aboriginal children and their families.

WHAT THE WAACHS FINDINGS TELL US ABOUT THE WESTERN AUSTRALIAN ABORIGINAL CIRCUMSTANCE

One of the major findings of the WAACHS was that to understand the mental health of Aboriginal children requires an appreciation of the broader circumstance in which they live.

At the broadest level three characteristics about the Aboriginal population are particularly critical to appreciate: population concentration and dispersion, early death, and higher fertility. These three characteristics combine to produce a very young population with a very low adult to child ratio. This is compounded by high rates of imprisonment, father absence and family breakdown with consequent sole parent status. Finally, low levels of education, high levels of unemployment, and low occupational status and low income produce diminished human capability with resultant excessive levels of stress. These circumstances change the capacity of the population to participate in and benefit from a "mainstream" configuration of services. This is even more problematic given longstanding patterns of social exclusion and social inequality.

Population Concentration and Dispersion

To study the Australian Aboriginal circumstance the survey team developed a new five-level measure of geographical remoteness, the level of relative isolation (LORI) (Zubrick et al., 2004). The five categories of geographical isolation range from none (the Perth Metropolitan area) to low, moderate, high, and extreme. Those families classified as living in extreme isolation live in some of the most parts of the world. Proportions of Aboriginal children in each LORI category were as follows: none, 34%; low, 24%; moderate, 21%; high, 11%; extreme, 10%.

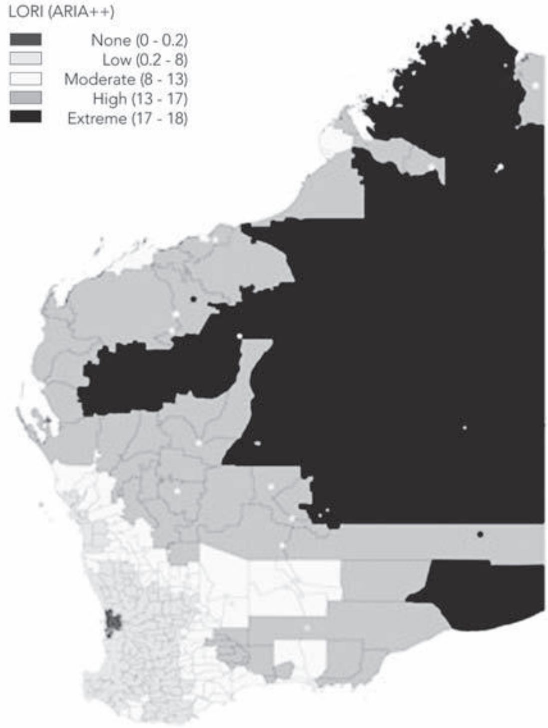
The WAACHS findings tell an important story about the size and the geographical distribution of the Aboriginal population in Western Australia (see Figure 8.1 and Table 8.1). The Aboriginal population is mostly located in metropolitan and regional centers with only about 15% of this population living in remote discrete communities. Understanding the size and dispersion of the Western Australian Aboriginal population is critical to the success of programs and services designed by, and for, Aboriginal people.

For example, Census data show that there were 9,226 Aboriginal children who lived in the Perth metropolitan area—an area of about 1,400 square kilometers. While this was the largest concentration of Aboriginal children in Western Australia, it also means that these Aboriginal children were counted in the metropolitan area along with 300,300 non-Aboriginal children. So, their population concentration in the metropolitan area is significantly smaller given the size of the mainstream population of the area. In contrast, around 1,127 Aboriginal children were enumerated in approximately 130 discrete Aboriginal communities in extremely isolated areas—this encompasses an area of approximately 1.3 million square kilometers (Silburn et al., 2006).

Early Death

Western Australian children living in the mainstream Australian population are living with family members who have increasing life spans (Australian Bureau of Statistics, 2004b). The mainstream Australian population is living longer.

Figure 8.1
Western Australia, level of relative isolation (LORI) categories based on ARIA++ values



Level of relative isolation	Square kilometers
None	1,412
Low	125,263
Moderate	226,975
High	839,056
Extreme	1,334,809
Total	2,527,516

It is difficult to underestimate the impact of early death particularly on the creation, sustainability and transmission of human capital within and between families. The lives of Aboriginal people are shorter than those of non-Aboriginal people. In Western Australia, for the period 1996–2001, the estimated life expectancy for Aboriginal people was 59 years for males and 67 years for females. For all people in Western Australia, estimated life expectancy was 78 years for males and 83 years for females—translating on average to shorter lifetimes of 19 years for Aboriginal males and 16 years for Aboriginal females (Australian Bureau of Statistics, 2004a). This large gap has ramifications at the community level, such as robbing younger generations of time spent learning from Aboriginal elders, which could be so beneficial if there were parity in life expectancy. At the population level, non-Aboriginal young people do not have to forego this opportunity. Nationally, death rates for Aboriginal people were higher than those for the total population across all age categories. The

Table 8.1
Population size and population proportions: Aboriginal and non-Aboriginal persons, Western Australia

	0–17 years		*18 years and over*		*Total*	
			Aboriginal persons			
LORI	*Number*	*% of all persons aged 0–17 years Number*	*Number*	*% of all persons aged 18 years and over*	*Number*	*% of all persons*
None	9,226	3.0	9,899	1.1	19,125	1.6
Low	6,835	5.8	7,593	2.6	14,428	3.5
Moderate	6,468	25.8	8,340	12.0	14,808	15.7
High	3,038	68.8	4,219	24.4	7,257	33.4
Extreme	1,127	83.9	1,748	36.4	2,875	46.8
Not applicable	—	—	3	—	3	—
Western Australia[a]	**26,694**	**5.8**	**31,802**	**2.4**	**58,496**	**3.3**
			Non-Aboriginal persons			
None	300,264	97.0	909,729	98.9	1,209,993	98.4
Low	110,022	94.2	285,422	97.4	395,444	96.5
Moderate	18,566	74.2	60,975	88.0	79,541	84.3
High	1,378	31.2	13,093	75.6	14,471	66.6
Extreme	217	16.1	3,056	63.6	3,273	53.2
Not applicable	3	—	84	—	87	—
Western Australia[b]	**430,450**	**94.2**	**1,272,359**	**97.6**	**1,702,809**	**96.7**

Source: Australian Bureau of Statistics (unpublished data); Census of Population and Housing.

[a] Data are based on Census place of enumeration. There were 70,703 persons who did not record an Aboriginal or Torres Strait Islander status and 19,244 overseas visitors on Census night—these categories are not included in the results. Data shown are different to the population benchmarks used in the WAACHS for weighting purposes. ABS Estimated Resident Population data were used to develop population benchmarks in the WAACHS as they account for the underenumeration and nonresponse present in Census data. Consequently, WAACHS population figures are higher than Census counts (see Zubrick et al., 2004, Appendix B). Census data are available at the Collection District (CD) level for both Aboriginal and non-Aboriginal people, enabling a link to the ARIA++ and also, therefore, to LORI comparison for these two populations.

[b] Includes "not applicable" CDs—that is, CDs for which there were no ARIA++ scores available.

largest difference was among those aged 35–54 years, where Aboriginal death rates were five times higher than those for all people (Australian Bureau of Statistics, 2004b).

Higher Fertility

Fertility rates indicate the total number of live babies a woman gives birth to during her lifetime. Again, in Western Australia in 2004, Aboriginal fertility, at 2.3 babies per woman, was somewhat higher than that for all Western Australian women, at 1.8 babies per woman. Although a difference of 0.5 babies per woman over her lifetime looks small, it actually represents a large difference at the population level. Age specific fertility rates indicate the number of babies women in a particular age bracket give birth to in any given year. The peak age specific fertility rate for Aboriginal women in Western Australia in 2004 occurred for women aged 20–24 years, with 139 babies per 1,000 women. In contrast, for all Western Australian women this peak was lower and occurred 10 years later in life, at age 30–34 years, with 114 babies per 1,000 women. The age specific fertility rates among teenagers (age 15–19 years, including births to mothers aged under 15 years) in Western Australia reveal that in 2004 the Aboriginal fertility rate was 4.4 times higher than that for all teenage mothers—88 babies per 1,000 Aboriginal women compared with 20 babies per 1,000 women in the total population. An analysis of median ages of birth mothers in Western Australia further confirms that Aboriginal mothers are substantially younger than all mothers—24.1 years for Aboriginal mothers compared with 30.3 years for all mothers (Australian Bureau of Statistics, 2004b).

A Young Population

Early death and higher fertility combine to produce a very young Aboriginal population. Nationally, the median age of Aboriginal people is 20.5 years, compared with 36.1 years for non-Aboriginal people (Australian Bureau of Statistics and Australian Institute of Health and Welfare, 2003). This relative youthfulness, in concert with higher fertility, has implications for policy and program content—especially if that content is directed at the total population, while also intending to service Aboriginal clients in lieu of Aboriginal-specific programs. It needs to be remembered that the aging baby boomers of the mainstream population will exert increasing demands for services relevant to *them*. This demand will carry financial consequences in the allocation of government budgets.

In contrast to the aging mainstream population, the Aboriginal population is considerably younger with a need for services appropriate to their demographic and burden.

Low Adult to Child Ratio

Using Census 2001 data, we have calculated the following adult to child ratios for Western Australia (adults aged 18 years and above): Aboriginal, 1.2 Aboriginal adults for every child; non-Aboriginal, 3.0 non-Aboriginal adults for every child. The number of adults per child reflects the young overall age of the Aboriginal population and is an indicator of the access that children and young people have to older, experienced people available for care, protection, cultural guidance and general life skills education, among other things.

High Imprisonment Rates

In Western Australia in 2005 Australian Bureau of Statistics data show that Aboriginal people were imprisoned at the (age standardized) rate of 2,697.0 people per 100,000 adult indigenous population, compared with 143.9 people per 100,000 adult population for non-Aboriginal people. This was the highest rate in Australia, meaning that Western Australian Aboriginal people were 18.7 times more likely to be imprisoned than non-Aboriginal people. Nationally, Aboriginal people were 12.1 times more likely to be imprisoned—still a substantial imbalance, but not as startling as that of Western Australia (Australian Bureau of Statistics, 2005).

Family Type

Imprisonment rates, father absence, and family breakdown produce a substantial variation in family structure (i.e., family type). Family type and family size both impact on the human capability of parents and caregivers in building good health, wealth, knowledge and cultural security for themselves and children in their care. For example, with all other parameters held equal, a single parent with five children is at a clear capacity disadvantage to build on these areas of human capability compared with a couple family with two children. The single parent has to spread their resources more thinly across five children, while the couple family has a smaller load and the option of sharing it. Utilizing the ABS's "family type" classification as reported in the 2001 Census, average family sizes were higher in every category for Aboriginal families (with the expected exception of couple families without children), with a total average family size of 3.8 persons, compared with 3.0 persons in non-Aboriginal families (Silburn et al., 2006).

The couple family without children category accounts for more than double the proportion of non-Aboriginal families (36.7%) compared with Aboriginal families (17.4%). Some of this difference may be a reflection of the far lower life expectancy of Aboriginal people compared with non-Aboriginal people, as well as the later-in-life peak fertility age of all women (30–34 years) compared with Aboriginal women (20–24 years). For example, lower life expectancy means fewer years spent as older "empty nest" families, and having children earlier reduces the opportunity for the "double-income, no-kids" pattern of many non-Aboriginal families aged in their 20s and 30s.

One-parent family types represented over twice the proportion of Aboriginal families (33.1%) compared with non-Aboriginal families (14.7%). Not only was there a much higher proportion of Aboriginal one-parent families than non-Aboriginal families, but there were also more children and dependents living in each of these families—one-parent Aboriginal families averaged 3.5 persons per family, compared with 2.6 persons for non-Aboriginal one-parent families.

This difference of 0.9 persons per one-parent family may look small, but at the population level it represents a significant difference in family size, along with possible increases in financial and parenting pressures compared with the average non-Aboriginal one-parent family (see Silburn et al., 2006).

In practical terms the direct impact of death, separation and divorce and incarceration on the lives of Aboriginal children is striking: About 6% of Aboriginal children under the age of three years and 20% of children aged between 12–17 years are being cared for by caregivers other than their original parent(s) (Zubrick et al., 2004).

Caregiver Education

About 48% of Aboriginal people aged 15–19 years are not attending formal education. This compares with about 24% of non-Aboriginal people (Australian Bureau of Statistics, 2004b).

Education is a critical component of human capital for its role in enabling access to employment and income—particularly as modern economies move to emphasizing the need for specialist knowledge and skills in technology and in industry. However, human capital also plays a role within the family and community. For example, in some populations higher parental education has been found to be associated with less harsh parenting practices and better child academic and behavioral outcomes (Miller, Jenkins, & Keating, 2002; Zubrick et al., 1997). Better parental knowledge and parental income directed to improving the material circumstances of a child particularly early in life, are associated with better child development outcomes (particularly language, cognitive and intellectual capacities) and are significant benefits derived from human capital building (Duncan & Brooks-Gunn, 1997).

Employment, Occupation, and Income

At the time of the survey rates of unemployment for families with Aboriginal children averaged about 24.4% across all regions. In the Perth ATSIC region the unemployment rate was 32.9% (Zubrick et al., 2004).

Any discussion of the employment status of caregivers of Aboriginal children must account for the effects of the Community Development Employment Projects (CDEP) scheme on the rates of their employment. The survey findings show that about 76% of all caregivers in the labor force were employed and of these 28% worked in the CDEP scheme (Zubrick et al., 2004). If CDEP is counted as unemployment, then the rate of unemployment of all WAACHS survey caregivers is about 46% (F. Mitrou, personal correspondence, September 24, 2006).

Amid a significantly higher rate of unemployment, employment that is available and undertaken is generally at a lower level of occupational skill and qualification. The general upshot of this is that at the time of the WAACHS survey Aboriginal people were earning on average $221 per week less than their non-Aboriginal counterparts ($364 vs. $585) and Aboriginal children are more likely to be raised amid significant levels of financial strain relative to non-Aboriginal children (Australian Bureau of Statistics, 2004b).

Stress

The longer-term effect of chronic stress on the child's developing brain, endocrine and immune systems is now understood to be a key mechanism in the process of the "biological embedding" of disadvantage. The survey findings show that more than one in five (22%) Aboriginal children are reared in households which have had to deal with seven or more major life stress events in the past 12 months (Silburn et al., 2006; Zubrick et al., 2005b). This is indicative of the extreme levels of stress experienced by many Aboriginal families with children.

THE MENTAL HEALTH OF AUSTRALIAN ABORIGINAL CHILDREN: PREVALENCE AND CORRELATES

With this context in mind we now turn to a description of the mental health of Australian Aboriginal children.

Several methods were used to determine the mental health status of Australian Aboriginal children. Because of the broad age range of the children in the survey (i.e., birth to age 18 years inclusive), and to restrict the burden on any single family, parents (e.g., usually the mother) were asked to complete the Strengths and Difficulties Questionnaire (SDQ) (Goodman, Ford, Simmons, Gatward, & Meltzer, 2000) on children aged 4–18 years. This questionnaire was also administered to Aboriginal children 12 years and older (e.g., self-report) and it was also administered to teachers of those children in school (e.g., teacher report). Only the parent report results are detailed here. With permission from the author of the SDQ some modifications were made to the instrument for used with Australian Aboriginal children (Zubrick, Lawrence, de Maio, & Biddle, 2006). The modified instrument demonstrated very good to excellent psychometric characteristics (de Maio et al., 2005; Zubrick et al., 2006; Zubrick et al., 2005a, 2005b) across a diverse range of geographical and cultural circumstances. In addition to the SDQ, extensive data linkage with the Western Australian Mental Health Information System was undertaken to determine the extent to which the survey children and their caregivers had had contact with inpatient and outpatient mental health services in Western Australia. Finally, because the SDQ with the modifications described earlier had never been administered before in Western Australia and in order to provide a benchmark for comparing the results from the WAACHS, a separate survey of 1,200 caregivers of children aged 4–17 years in Western Australia was commissioned by the WAACHS survey team. The sample was selected randomly from the Electronic White Pages and conducted in September 2004 using Computer Assisted Telephone Interviewing (CATI) by the Survey Research Centre at the University of Western Australia. This enabled comparisons with the non-Aboriginal population where these were needed. All of these procedures and findings derived from them are fully described elsewhere (Zubrick et al., 2005b).

Prevalence of Clinically Significant Emotional and Behavioral Problems

With respect to 4- to 17-year-old Aboriginal children, consider the following:

- The proportion at high risk of clinically significant emotional or behavioral difficulties is significantly higher than in the non-Aboriginal child population. Almost one-quarter (24.0%) of Aboriginal children aged 4–17 years were at high risk of clinically significant emotional or behavioral difficulties, a proportion significantly above the 15.0% found among the state's general child population. This compares with data collected by the New South Wales Health Department using Goodman's parent-reported SDQ, from which it is estimated that 22.9% of Aboriginal children in that state are at high risk of emotional or behavioral difficulties.
- A greater proportion of younger children are at high risk of clinically significant emotional or behavioral difficulties. The proportion of Aboriginal children at high risk declined with increasing age, with children aged 15–17 years 62% less likely to be at high risk compared with children aged four to seven years. This contrasts with proportions found in the general child population, which began to decline from age 11 and showed no significant difference in the level of high risk experienced by younger and older children.
- Males were twice as likely as females to be at high risk of clinically significant emotional or behavioral difficulties. A greater proportion of male Aboriginal children were at high risk of clinically significant emotional or behavioral difficulties than female Aboriginal children and, after taking into account the age of the child and their LORI, were twice as likely as females to experience such difficulties. For non-Aboriginal children, there was no significant difference in the proportion of males and females at high risk of clinically significant emotional or behavioral difficulties.
- Extreme isolation may be a factor protecting against high risk of clinically significant emotional or behavioral difficulties. Aboriginal children living in the most isolated areas of the state were significantly less likely to be at high risk of clinically significant emotional or behavioral difficulties. In areas of extreme isolation, children were 83% less likely than Aboriginal children living in the Perth metropolitan area to be at high risk. While there are a number of factors influencing this finding, it is nevertheless evident that in areas of extreme isolation, adherence to Aboriginal culture and traditional ways of life may be protective against high risk of clinically significant emotional or behavioral difficulties. The lowest proportions of children at high risk of clinically significant emotional or behavioral difficulties were recorded in the Warburton and Broome ATSIC regions, while the highest proportions were recorded in the ATSIC regions of South Hedland, Perth and Geraldton.

- Conduct problems and hyperactivity were significantly more common than in non-Aboriginal children. The specific emotional or behavioral difficulty affecting the highest proportion of Aboriginal children aged 4–17 years was conduct problems. Nearly one-third of children (33.9%) were at high risk of clinically significant conduct problems compared with 15.8% of non-Aboriginal children. In respect of hyperactivity problems, 15.3% of Aboriginal children were at high risk compared with 9.7% for non-Aboriginal children. The proportions of children with conduct problems and hyperactivity were lowest in areas of extreme isolation.
- Impairment of function as a result of being at high risk of clinically significant emotional or behavioral difficulties was lower compared with non-Aboriginal children. This survey assessed the level of impact (or functional impairment) that the presence of emotional or behavioral difficulties has on the home life, friendships, learning and leisure activities of the child. Of those Aboriginal children at high risk of clinically significant emotional or behavioral difficulties, 30.9% were at high risk of clinically significant functional impairment as a result of these difficulties. In the non-Aboriginal child population, the proportion was higher at 40.6%.
- Among all Aboriginal children, 10.4% were at high risk of clinically significant functional impairment, compared with 9.3% of all non-Aboriginal children. Although the proportion of non-Aboriginal children at high risk of clinically significant emotional or behavioral difficulties was significantly lower than that for Aboriginal children, non-Aboriginal children were at higher risk of clinically significant functional impairment as a result of these difficulties. As a result the overall proportions of children at high risk of clinically significant functional impairment were about the same.

Correlates of Clinically Significant Emotional and Behavioral Problems

The WAACHS was a cross-sectional study. Survey participants were asked a range of questions to determine their psychosocial circumstances, their living arrangements, as well as to determine some basic features of their home, neighborhood and community. Because the study is cross-sectional, these additional measures can be examined as correlates of social and emotional problems, rather than causal determinants. Many of the correlates documented here show statistically significant relationships with social and emotional problems, and indeed, in longitudinal studies have been demonstrated to be causal determinants. Nonetheless, the associations here must be interpreted with caution.

For children most at risk of clinically significant emotional or behavioral difficulties, family and household factors show some of the strongest associations with risk of clinically significant emotional or behavioral difficulties in Aboriginal children and young people, particularly the following:

- *Life stress events (such as illness, family breakup, arrests or financial difficulties)*. Just over one in five children were living in families where seven or more major life stress events had occurred over the preceding 12 months. These children were five and a half times as likely to be at high risk of clinically significant emotional or behavioral difficulties than children in families where two or fewer life stress events had occurred.
- *Quality of parenting*. Around one in four children were living in families with poor quality of parenting. Children living in families with poor quality of parenting were almost four times as likely to be at high risk of clinically significant emotional or behavioral difficulties than children living in families with very good quality of parenting.
- *Family functioning*. Around one in five children were living in families that functioned poorly. These children were over twice as likely to be at high risk of clinically significant emotional or behavioral difficulties than children living in families with very good family functioning.

Caregiver circumstances and the physical health of the child also play a part, the most significant factors for emotional and behavioral difficulties being the following:

- *The physical health of the caregiver*. Children in the primary care of a person with a long-term and limiting medical condition were over three times as likely to be at high risk of clinically significant emotional or behavioral difficulties than children whose primary caregiver had no medical condition lasting six months or more.
- *Speech impairment in the child*. Children with a speech difficulty (having trouble saying certain sounds) were over three times as likely to be at high risk of clinically significant emotional or behavioral difficulties.

A number of other family, caregiver, and child physical health factors were found to be significant in terms of the likelihood of children being at high risk of clinically significant emotional or behavioral difficulties:

- *Family arrangements*. Just over one-third of children were in the care of a sole parent. These children were almost twice as likely to be at high risk of clinically significant emotional or behavioral difficulties than children living with both their original parents. Children cared for by a person other than an original parent (such as aunts and uncles) were over twice as likely to be at high risk.
- *Residential mobility*. Children that had lived in five or more different homes since birth were one and a half times more likely to be at high risk

of clinically significant emotional or behavioral difficulties than children who had lived in fewer than five homes.

- *Caregivers' use of mental health services*. Children in the primary care of a person who had used Mental Health Services in Western Australia were one and a half times as likely to be at high risk of clinically significant emotional or behavioral difficulties than children in the primary care of a person who had not used these services.
- *Children with runny ears*. A child suffering from runny ears, a more severe form of otitis, was over one and a half times more likely to be at high risk of clinically significant emotional or behavioral difficulties than a child not suffering from runny ears.
- *Children with vision problems*. A child without normal vision in both eyes was over one and a half times as likely to be at high risk of clinically significant emotional or behavioral difficulties than a child with normal vision in both eyes.

Australia has a history of forcibly removing Aboriginal children from their families of origin (Human Rights Equal Opportunity Commission, 1997; Silburn et al., 2007) and on the 13 of February 2008 the Prime Minister of Australia issued an apology, on behalf of the government of Australia, to Aboriginal Australians for "the laws and policies of successive parliaments and governments that . . . inflicted profound grief, suffering and loss" arising from the forced removal of children from their families.

In the survey, the Aboriginal caregivers were asked whether they were taken away from their natural family by a mission, the government or welfare. Respondents were not asked to identify which of these entities took them, where or when they were taken or under what circumstances this took place. The only information collected was whether they were taken away. About 12% of the primary caregivers of the survey children had been forcibly separated from their natural family. The WAACHS also found that over one-third (35%) of all Aboriginal children in Western Australia were living in households where a caregiver, or a caregiver's parent, had been forcibly separated from their natural family by a mission, the government or welfare.

The WAACHS findings were the first to empirically document the intergeneration effects of the forced removal of parents on the offspring of these parents:

- The children of Aboriginal caregivers who had been forcibly separated from their natural family by a mission, the government or welfare were over twice as likely to be at high risk of clinically significant emotional or behavioral difficulties after adjusting for age, sex, LORI and whether the primary caregiver is the birth mother of the child.

- These children were more likely to be at high risk of clinically significant emotional symptoms, conduct problems and hyperactivity and to have levels of both alcohol and other drug use that were approximately twice as high as children whose Aboriginal primary caregiver had not been forcibly separated from their natural family.

Some protective factors were also revealed in the findings of the WAACHS. The likelihood of Aboriginal children experiencing emotional and behavioral difficulties was found to be lower where the following circumstances existed:

- *High household occupancy level*. Children living in homes with a high household occupancy level were half as likely to be at high risk of clinically significant emotional or behavioral difficulties than children living in homes with a low household occupancy level.
- *Living in extremely isolated locations*. Children living in areas of extreme isolation were one-fifth as likely to be at high risk of clinically significant emotional or behavioral difficulties compared with children in the Perth metropolitan area (no isolation).

IMPLICATIONS FOR THE MENTAL HEALTH OF AUSTRALIAN ABORIGINAL CHILDREN

How should we understand that implications of the WAACHS with respect to the mental health of Aboriginal Australian children? We believe there are three principal implications that must be understood in order to respond with appropriate treatment, prevention and promotion programs.

Mental Health Treatment, Prevention, and Promotion Opportunities Need to Be Changed to Account for the Small Size and Dispersion of the Australian Aboriginal Population and the Diminished Capability of Aboriginal People to Benefit

We have already outlined the challenges that human services face in reaching the urban, rural and remote Aboriginal Australians. The size and dispersion of the Australian Aboriginal population make it difficult to reach with treatment, prevention and promotion opportunities—the planning and commissioning of services simply does not take these constraints adequately into account. Moreover, when Aboriginal Australians are reached, most programs are not adequately adjusted to deliver these opportunities with any intensity and sustainability to produce developmental benefits. Programs are not adjusted for the level of burden that Aboriginal Australians face in terms of capability to benefit.

About 66,100 Aboriginal and Torres Strait Islander people were living in Western Australia at the time of the survey, of which 36,300 were adults aged 18 years and over. These adults have a principal responsibility for the care of an estimated 5,490 Aboriginal children who were at high risk of clinically significant emotional or behavioral difficulties.

In contrast, the non-Aboriginal population has about 1.4 million adults aged 18 years and over, and an estimated 54,300 non-Aboriginal children were at high risk of clinically significant emotional or behavioral difficulties. Thus, at a population level, emotional or behavioral difficulties in children impose a burden on the adult Aboriginal population that is about 3.9 times greater than that imposed on the non-Aboriginal population. This burden is exacerbated in the Aboriginal population by a shorter life expectancy, greater family disruption, and impoverishment of human, psychological and social capital (Zubrick et al., 2004).

Mental Health Treatment, Prevention, and Promotion Opportunities Depend too Much on Community Development Approaches and Are Not Sufficiently Focused to Improve the Human Development of Individuals

The implications of the psychosocial position that Aboriginal Australian's occupy within the wider Australian population has profound implications in approaching prevention and treatment of the mental health of Aboriginal children. This combination of circumstances not only generates impoverishment of the environments in which children are raised, but also compromises the human, psychological and social capital that forms the wider pool of resources essential for child growth and development. Impoverishment across these resource domains is accompanied by a reduction in the choice, capacity and flexibility of caregivers, families and communities to meet the demands and challenges of daily living. The present rate of change attributable to advances in income, education and training within the Australian Aboriginal population is simply too slow to reap the human capability benefits needed at a population level (Steering Committee for the Review of Government Service Provision, 2003). Some of this reflects the low overall population base from which gain is being measured. However, a great deal of this effect reflects the inadequate effort being spent in quality care for children, and education, training and employment. This is why there is a requirement to focus on improvements in fundamental aspects of Aboriginal human capital—care, health, education and income—as a central, strategy in improving capability (Zubrick et al., 2004; Zubrick et al., 2006; Zubrick et al., 2005b). At present, family and community development policies and programs of all agencies and departments with responsibilities for families with Aboriginal children need a greater focus on child development and on enabling the capacities of families and communities as they apply to the development of children. Improving the prospects for Aboriginal children is contingent on how all human service systems respond by developing programs, interventions and policies that can effectively address these needs. Prevention, promotion and community development programs need to be implemented on the basis of either developmental theory or an evidence base (preferably both) that are sufficiently designed and delivered to expand the capability of individuals (i.e., caregivers and the children themselves) specifically, and families more generally. All human service departments and agencies need to make clear the evidence base and/or theoretical grounds on which their programs and interventions are based. While this would be of benefit with respect to mainstream efforts, it is absolutely essential for efforts targeting Aboriginal families and communities. It is vital that policy makers, program designers and service providers adjust both the program content and the level and modes of service delivery in the family, community and other human services sectors to take account of the capability profile of the Aboriginal population.

Mental Health Treatment, Prevention, and Promotion Opportunities Need to Be Positioned within Broader Early Development Programs for Australian Aboriginal Children and Families

In designing better evidence-based mental health treatment, prevention and promotion services for Australian Aboriginal populations there are specific program principles that should be given priority, particularly where children are concerned (Ramey & Ramey, 1998):

- interventions that begin earlier in development and continue longer afford greater benefits to the participants
- programs that are more intensive (as measured by number of home visits per week, number of hours per day, days per week, weeks per year) produce larger positive effects and children who receive more, benefit more
- children who receive direct educational experiences (i.e., as in educational day care, enriched home care, kindergarten and preprimary experiences) show larger benefits than do children in programs that rely on intermediate routes to change child competencies (i.e., parent training alone)

- interventions that provide more comprehensive services and use multiple routes to enhance child development generally have larger effects than do programs that have a narrower focus; for example, an early educational child care program delivered in the Australian Vocational and Educational Training setting not only provides a direct benefit to the child but also provides training (e.g., parenting and employment) opportunities for the caregiver—this results in a larger developmental gain relative to the use of one or the other of these strategies alone
- environmental supports, when designed, need to maintain children's positive attitudes and behaviors and encourage continued learning related to school
- interventions that are perceived as culturally relevant and welcomed are more likely to be valued, used and incorporated into participant's everyday lives

What should policy makers and contract managers look for in terms of evidence-based "developmental content" in policies and contracts for services that are specifically focused on increasing immediate and long-term social, civic and economic participation of children, families and communities?

At the broadest level specific program content needs to develop and improve social functioning in Aboriginal children with respect to regulation of emotions; engagement in exploratory behavior; language acquisition and communication; self-direction; intellectual flexibility; some degree of introspection, and self-efficacy in meeting life's challenges.

As a result of this, for Aboriginal children and young people, there is particular value in program content that provides the following (Ramey & Ramey, 1998):

- development of life skills, including racial socialization, and positive cultural identification
- appropriate exposures to stress and challenge that are modulated by emotional support and mentoring
- encouragement of exploration
- celebration of developmental milestones
- guided rehearsal and extension of new skills
- protection from inappropriate disapproval, teasing, or punishment
- facilitation of emotional competence

Examples of evidence-based programs that have been developed to take account of these principals and content requirements are extremely rare. Those that begin to meet some of these requirements are only at an early stage. Some of the most encouraging emerging evidence-based programs are those that seek to influence Aboriginal parenting practices—notably for very young children (Robinson et al., 2009).

CONCLUDING COMMENTS

We have attempted here to span the breadth of the findings of the WAACHS with a specific focus on mental health. The current Australian Aboriginal circumstance is confronting—both for the gap between the developmental prospects of the mainstream population when compared with those prospects of Australian Aboriginal people, and for the persistent failure of successive Australian governments to improve this circumstance over many decades. A singular focus on mental health services and their provision, for this reason, is doomed to join the ranks of other failures. This is why the preceding implications have been framed developmentally and holistically.

No summary of the current circumstance would be complete without noting that historical and contemporary records of efforts to improve the lives of Australian Aboriginal people have repeatedly asserted that Aboriginal people wish to be consulted, and participate in, decisions that affect them. We have commented elsewhere that it would seem remarkable that such a request would even need a rationale or justification (Silburn et al., 2006). This repeated request is based upon far more than acknowledging and using the preferences, wisdom, learning, local knowledge and cultures of Aboriginal people. The request for participation in decisions that affect them is a request for participation in the democratic process and access to the functions and benefits of a civil society. These benefits allow for the expansion of human capabilities and choice based upon human development principles (el Haq, 2003). In meeting the request of Aboriginal people to participate in decisions that affect them, governments and their departments and services are mandated with the power to establish the basis of participation for all Australian citizens through the creation of legal and social frameworks and the implementation of policies. In this way, the Australian government, in concert with state and territory governments, is charged with enforcing the framework that supports the expansion of human capability in populations. This is achieved by the following:

- enforcing legal frameworks that outlaw discrimination, reduce social exclusion, and increase economic, social, and civic participation
- promoting and strengthening local institutions that provide opportunities for participation and empowerment in a range of activities and services

- ensuring a fair distribution of opportunities through a fair distribution of income, wealth, and the means of income and wealth generation
- setting benchmarks for, and monitoring, three internationally recognized sentinel indicators of human development: income, health, and knowledge
- directing the creation or maintenance of data sources on which to base evidence of progress

The participation of Aboriginal people in decisions made about them is a measure of the success with which Australian governments and their departments and agencies enforce and achieve the outcomes of this framework. Simply put, it is not possible to achieve these goals without the participation of Aboriginal people. As a result, the requirement for advancing the Australian Aboriginal circumstance, and specifically improving mental health prospects, rests firmly upon the involvement of Aboriginal people in the leadership, direction, development, implementation and accountability of strategies that affect their lives and destinies.

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Chapter 9

THE CHILD'S EXPERIENCE OF TRADITIONAL ADOPTION PRACTICES IN NEW CALEDONIA[1]

Marie Odile Pérouse de Montclos

In New Caledonia, traditional giving of children is still widespread among the Kanak people. This happens in a pattern of exchange and of giving, following various modes of transmission. From a legal point of view this "customary adoption," completely regulated by Kanak society, is different from state-controlled adoption under Western civil laws. Revealing rich and complex relational mechanisms, culturally attached to the Pacific Melanesian community, customary adoption seeks to maintain a social, cultural and economic equilibrium. It is based on processes of exchange between the members of the society, which are essential for homeostasis within the society.

The phenomenon of the transfer of children, or the giving of children, is still largely widespread in Oceania, and has attracted much attention among anthropologists. For people in the West, the idea of voluntary separation from a child, and without being pushed by necessity, is a mystery: "The opacity of this practice is such that observers gave in to the temptation of pejoratively dismissing it as unnatural behavior. At the same time, this act seems to some people to be the quintessence of social rule, like the true human capacity to deny impulsive constraints, and this among people who seem, moreover, closer to nature than the cultural sophistication of their foreign visitors" (Lallemand, 1983).

The rupture of original affective links requires the clinician who is sensitive to the parent–child attachment, to look at the psychopathological consequences in the adopted young child and in his or her family circle.

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[1] Translated from the original French text by Margaret Paul.

During eleven years of clinical experience in New Caledonia, working in the Early Childhood team, we have seen and consulted a number of clinical cases, without a single official study ever having been undertaken. Similarly, adoption remains an anamnestic element that is recurrent in the history of mothers of Kanak origin, who were consulted.

In order to develop the multiplicity of these clinical cases, out of concern for psychopathological understanding, we introduced a dialogue between clinicians and anthropologists. This joint aim leads us to approach Kanak customary adoption from both a cultural and a clinical perspective, emitting some psychodynamic hypotheses; it would be good to prevent the clinical effects raised by these hypotheses.

THE INDIVIDUAL AND THE CHILD IN THE MELANESIAN CONTEXT

The transfer of children adheres to the logic of exchange in Oceanic societies: exchanges between clans or among the clan, between close or extended family members, and with them the reciprocity of the giving finds its importance, not in the quality of the goods exchanged but in the relation that this generates. "The circle of giving and receiving, prepared without interest or bequest without compensation at the time, of land, or products, of children (permanent or temporary adoption), expresses social relations" (Bensa & Rivière, 1982).

Exchange has its own value, that of forming alliances through reciprocal obligation. And this force of giving, as much as social relations can be expressed thus: "To give in Melanesia does not imply to abandon an object or to lose without compensation. It is to offer oneself, it is to accomplish the act with which to respond, and to incite the giving of oneself in return" (Leenhardt, 1953, p. 128). It questions the place of the individual in relation to the membership of the cultural group.

The Individual

The individual is an instrument of the social network. He or she only exists in relation to others, to his or her clan, to his or her land, and is only one part of a group of which membership is vital: "There are only people in reference to others. Always. I say that the man who has succeeded, is the man who maintains his alliances on either side" (Tjibaou, 1996, p. 107).

This concept of the individual applies to the child, from the youngest age. As soon as a name is attributed, the small child becomes the bearer of a plural identity, linked to ancestors and members of the maternal and paternal lines. This integration of the person into the visible and invisible world, in times past, present and future, creates a strong link with the social group: "In the traditional system, a child, a girl, a woman, belongs not to herself, but to those who have authority over her by rights of paternity, of the head of the clan, of adoption or of acquisition. Spouses themselves do not have their own existence outside the clan; their personality is that of the clan and their marriage is an act of the clan" (Dubois, 1984).

As such, the transfer of children is at the heart of society. These transfers are carried out within families, joining parents and children together. And these many links "where parenthood does not necessarily denote prime caregiver" will grow between members of the family from the child's birth.

As such, the relationship of effective parenting will not be limited to those who are direct descendents. Rather, parenting includes all the adults in the family circle and those who, from near or far, will participate in the education of the children. "These [children] are not the exclusive property of their biological parents, they belong to the *Kopy Tangata*, to the whole group and their parents do not have to protect them for themselves" (regard sur l'enfant fa'a'amu, 1993, p. 23).

It is just as common to use the name "father" to refer to the biological father's brothers. Similarly, all the mother's sisters are called "mother." In principle, none of these mothers or fathers has an "exclusive" relationship with the child, since parenthood, transferred amongst the entire group, is designed to reinforce the child's feelings of integration.

These initial observations lead us to believe that the terminology of parenthood, as used today, still conforms to the canons of tradition. Nevertheless, we would observe that some of the children interviewed experienced some difficulty in describing the parenting relationships beyond their "close" family, in understanding the roles of their biological and adoptive mother and father.

Today as in the past, in accordance with the traditional education system as described by experts, children enjoy much freedom. One could say that this allows them to move freely between the various homes of their grandparents, their aunts and uncles, to see cousins, to go to Noumea. It seems that this mode of living is enduring, although it is made harder by maladaptation to the mode of living. Therefore we have been helping with variations according to the region and the socio-cultural situation of the families.

The Child

The child that is symbolically undifferentiated within the social group, will develop a special relationship with the surrounding relations.

The Biological Mother

The relationship to the biological mother remains privileged, at least in the child's first months of life. At birth, the mother can, through feeding, develop an intimate relationship with her baby. This role of feeding is not taken from her, neither is it made an object of *systematic* appropriation by the other women in the tribe. (The feeding is prolonged as long as the child wants it. Even if the child becomes an object of constant attention by the other women of the tribe, we have not observed this to be effective *appropriation* of the child by one or many women of the group. Certain societies go much further in the collective responsibility for children.)

After weaning, it is time to set up a collective system of education. This is specifically presided over by the other women present. From then on, it is generally considered that only the *physical responsibility* of the child falls to the mother. The roles of each of the women are not pre-established and existent. On the contrary, there is a considerable degree of flexibility; this is doubtless due to the proximity of the person and of her availability, which determines her role in the daily education of the child.

The Biological Father

The biological father, to whom tradition grants only the role of being an accessory in procreation, has a social and moral responsibility towards his child: "Two men swap places with their sisters. They ignore their role in the brood and therefore do not even imagine recognizing themselves in their children, their own organic life. On the other hand, they see their blood in their sister's son, which is also the blood of their own mother. They bless this title and cherish their sister's son, this new one which is their blood, while their own children, whom they certainly love, have less effect on the fiber of their being" (Leenhardt, 1990 [1947], p. 40).

The Maternal Uncle

It is the maternal uncle, true father in the "giver of life" sense, who is responsible, in theory, for the real education of the child. He transmits to the child the knowledge required for social integration. Since the child's birth, the predominant role of the maternal uncle is affirmed: "it is he who is the first to be informed of the birth of the child, and who will be charged with instilling in his or her ear, breathe, therefore life" (Leenhardt, 1990 [1947], p. 40). Consequently, the relationship established between the uncle and his nephew or niece will be to impart the rights and reciprocal responsibilities. This will last for the whole of the child's lifetime.

The maternal uncle keeps his importance, whether it be daily in the sense of being a privileged referee, or in the major events of life such as birth, marriage and death. The tradition remains indestructible here, and perhaps this explains the frequency of transfers of children to the maternal uncle.

The feeling of paternity of maternal uncles is confirmed by the interviews conducted on this point. One of the interviewees, asked about his relationship with his adopted children, all children of his sisters, explained it thus: "They are my blood, they are my children and I am their father." Reciprocally, for the adolescents over whom he is the guardian, he is *the father.*

The Grandparents

Grandparents also have an important role in the education of children. Grandparents are described as being all the levels of blood relatives who are great uncles and great aunts who make up the clan (Leenhardt, 1953). They are those who, in traditional society, transmit the history of the clan and its ancestors to the children, through stories and legends. This facilitates teaching social codes of conduct. They continue to carry out this role today, in either a tribal or urban situation. Above all, they are often in charge of their grandchildren, whether through failure of the parents or for simple commodity.

THE GIVING OF CHILDREN IN A MELANESIAN CONTEXT

These transfers are traditionally divided into two categories:

1. The *little adoption* of friendship, very widespread, happens through a simple presentation of the child; in principle, he or she remains unchanged in his or her personal status.
2. *Customary adoption* is the object of formalization and involves the child's total integration into its host family. *Public or private*, this form of transfer corresponds to a search for heritage by an individual or a group. It intervenes in particular situations, bringing with it a change of name and situation for the child (or for the adopting adult), and as such corresponds to adoption under French law.

Public Adoption Is a Political Choice

It can be collective: Melanesian society is immersed in the land of migration where the migrants and the immigrants of the population live. Oral tradition is rich with stories of outsiders arriving in unknown lands. In this case, adoption by the natives gives rights to migrants.

Collective adoption therefore articulates this principle of hosting: it is established through the attribution of a name. The adoptee is born into a new identity, linking him or her symbolically and materially to the earth.

In other cases, it is a question of giving oneself to the chief. Thus, when a tribal leader dies, the plebiscite of the people and of the tribal elders can attribute the quality of grandson to a child who is publicly adopted by the democratic collective. This collective then plays the role of public father and mother (Wahuzue, 1992, p. 11).

Clans must ensure their perpetuity: in the absence of an heir, it is therefore normal to adopt a child or an adult in order to ensure the continuity of the clan name, even years after its disappearance. Invested with the guidance of the elders, the adoptee will carry on the clan's initiatives of exchange with other clans, and the property rights will belong to him or her.

Private Adoption: To Give Without Abandoning

Customary adoption is usually private, and relates to diverse circumstances or principles. Specifically, one of the most frequent cases is the return of the child to the maternal clan.

An instrument of social identity, the child will ensure the reinforcement of the lines established *previously*. Within this enlarged parenting system surrounding the child, and with advance warning, the giving of a child responds to another social requirement: it satisfies the desires of people other than those with whom the parents are customarily linked.

When it occurs within the family, the transfer of a child registers a double relationship of integration into the group and with the parents, and represents more than a response to the needs of the child.

This giving also matches realistic conditions. This is because to give reciprocally is only possible and desirable when the demographic situation of the donors allows it. In the absence of sufficient descendents, the debt is deferred to another generation. Moreover, this reserve seems to apply to the whole phenomenon of adoption. Because if the giving of a child also represents a method to manage the whims of demography and to equalize generations, it does not put the demographic stability of the givers at risk.

When the eldest of the siblings does not have a son, the other brothers have to give him a child. This obligation is part of a tradition that sees the eldest as having his own value, and needing to ensure he has descendants. For the same reasons, the giving of a child can be carried out to the benefit of a younger brother or first cousin: "We give because it is necessary and because we have to, because a brother has to have the ability to protect his place." This affirmation expresses the importance of children. Children are guarantors of the position of their father in relation to the clan and to the clan leader. By ensuring the continuation of the name, they ensure the social identity of their relative, and guarantee them the right to exist and to continue, on the basic element of identity, and for use and property rights. As such: "To give a name to a child, a boy or a girl who has just been born, constitutes the fundamental demarcation in Kanak society, within the framework of the single procedure which simultaneously puts the destinies of the individual and of their inclusion in the collective at the foundation. The name given is that of a man or a woman from the grandparents generation, not that of the parents, that of a person who has lived, has benefited from a social and financial stature, at this integral moment it is transmitted to the newborn" (Guiart, 1992–1994, p. 63). And this importance of the transmission of the name is also part of a general strategy of perspective, a projection on the future. No one ignores the demographic disaster suffered by the Melanesian population since first contact with Europeans, an important cause of the rapid propagation of gonorrhea. This phenomenon, together with the movement of the surviving population during the financial appropriations, destined the whole society to extinction. It is therefore easy to imagine that for men in a group who saw their identity as suddenly stolen, the appropriation of a child could be seen as the means to restore a certain demographic and spatial equilibrium. The relation between mother and child ceased to be recorded for future social relationships. It came to be perceived equally by the different participants in the exchange.

Similarly, when grandparents ask to take their grandchildren, they cannot be refused. This is because of the established respect for name and the rules of succession. And this is the case even when the biological parents do not approve of the grounds of this process: "One can adopt a child out of friendship for its parents, but usually the motives are more for reasons of interest. One can do it to increase one's family or clan. An old woman, foreseeing that she would be abandoned in her old age, adopts a little boy or little girl to provide services that she cannot or does not want to do herself" (Dubois, 1984, p. 41). These cases exist: one of the interviewees said she was very shocked by the attitude of one couple who, at the time of collection, demanded that one of their grandchildren be given to them, to live with them. The group of people questioned seemed to share this point of view, but not one of them envisaged refusal as a possible solution.

It is difficult to know for sure if the sex of the child matters. Some interviewees thought only a boy could be valuable, as a girl is destined to leave again in the future, when she marries. Others argue that a girl is the only one capable of retaining the flux of life, as she has to take the place of her mother or grandmother. Ultimately, the responses differ according to the geographic origin of the interviewees.

The return to the maternal clan. The most specific case is that "the woman offered to a clan is a loan. She must make a return to her clan in the form of her daughter or her granddaughter. If one generation is prevented from making a return, the debt is deferred to the next generation. These contracts can last over three or four generations" (Leenhardt, 1990 [1947], p. 194).

Thus, giving a child is unlike giving a woman. It is written according to the logic of exchange and of mythic line. It is expressed as homage to the line of life, rather than the material transfer of an individual. Evoking this respect for the flux of life, Tjibaou (1996) said, "The vital flux which does not belong to me. It is blood, it is life, but it is life that comes to me in the totem of the mother, of the maternal clan which flows in me. And I do not have the right to dilapidate it. I have to honor it because it is mine, but it does not belong to me. I am a tenant of sorts" (p. 108).

The notion of the flux of life returns throughout all the discussions: "It is the mothers who give life, so one has to render them, not only because one has to, but also so as not to break the relationship." Lastly, through the specific role attributed to the maternal uncle, the research draws a certain equilibrium between family relations.

This giving of the child in return becomes the object of a negotiation between different partners of an initial exchange. The negotiation is carried out in order to know the maternal and paternal clans and the child's parents, and, in principle, can only be realized with the agreement of all parties. It is materialized by the customary gesture, before and after all discussion.

Note that according to the interviewees, the adoption or the giving of a child takes place without any financial exchange between the parties. In any case, due to a particular law in New Caledonia, this type of adoption is entirely regulated by custom. It is not recorded in a specific registry (e.g., birth certificate). Jurisdiction of customary adoption has been studied and is drawn from this section of the article.

COMMON CHARACTERISTICS OF DIFFERENT TYPES OF ADOPTION

It is important to understand that the giving of a child does not amount to the abandonment of rights, and that it proceeds as a deal that is *a priori* voluntary. It emerges from the interviews that the concept of abandonment, or of the disappearance of the parents, long presumed to be the origin of adoption, plays little or no role in the giving of children. "The mother, for her part, disengaged from most of the responsibilities, does not engage in any feelings of jealousy, no anguish over the fact of the aspirations of independence shown by her child. And doubtless this is the reason that the adoptions are so common in the Melanesian context. One gives one's first child to the eldest brother or to the chief, another to the clan of the spouse out of gratitude; one also gives one's children to those who want and deserve them, and this is without the maternal fibers seeming to react in the least" (Mélanésiens d'aujourd'hui, 1976).

Once the customary obligations are complete, the child is named. With this, he or she is completely integrated into the adoptive clan. But this integration does not lead to a rupture from the child's birth family. The memory of his or her origins will be transmitted to him or her, implying a total absence of secrecy about the giving of the child. Links to the biological family are not broken, so it seems this transfer of the child solicits new perspectives and the opening of new social relationships. (Moreover, this seems logical: the giving intervenes within parenthood, and the origin of the child is known to all. As such we do not enter into the French adoption scheme where the rule of secrecy protects both the biological family and the child; here, in order to be effective, the giving has to take place in the eyes of the whole of the collective and therefore respond publicly to this need to give.)

It seems that the material transfer of the child is recommended during the first year, and without a planned period of adaptation. (The only piece of information we obtained, and which must be used with the greatest care because it is simply indicative, is a report on the nutritional state of the children, made by the welfare services (DPASS Nord). In this document, adoption is presented as one of the causes of weaning, which leads us to believe the transfer happened very early. But according to several of our interviewees [Noumea, December 1998], the age of the child can vary according to the circumstances of his or her adoption.) Occasionally the giving of a child may be only symbolic, having effect only in the future. Some children who are moved will also be raised by their biological parents until their marriage, the customary and social consequences of this giving only affects them at the time of becoming an adult and of marriage.

The presentation of the child is the object of a codification. The parents have to respect certain rules of precedence that drive them to give, not according to their preferences, but according to a code of behavior recommended by the group.

Therefore parental acceptance most often follows a social rule with which one has a deep agreement: "To agree to give a child is to prove familial spirit, whereas a refusal is considered to be a denial of the family relationship with the person who asked. Another powerful social norm implies that it is difficult to refuse to give a child, especially if the person who asks is a close parent" (*Regard sur l'enfant Fa'a'amu*, Collection, APRIF, 1993).

Even today this profound awareness of social interest seems to drive the giving of the child. But it cannot completely overcome the obstacles of suffering, or feelings of guilt. It is apparent that when a child is adopted, this socially accepted situation brings for each of the participants their own set of difficulties.

Women seem to have a harder time than men in accepting a child's departure. One of them told of locking herself in her hospital room to prevent the child leaving. These accounts, which concern all forms of giving of children, tend to prove that women's attitudes have changed. At the very least, they no longer hesitate in their reticence towards the transfer of their children: many of them challenge the passive role of mothers: "The woman gives or receives, without her wishes ever being considered."

Tempting as it is to include the giving of children *a priori* in the network of traditional social relations, it also represents an extraordinary form of solidarity. A certain number of contemporary adoptions, whether they take place at a ritualization or not, begin with a failing, an incapacity, or the disappearance of the parents. (Most often, in this case, the grandparents will raise the child permanently.)

After examining the birth certificate registries that note customary adoption, we established that many of these children were born to an unknown father and a very young mother. In such cases, the adoptive parent was often the maternal uncle. When asked about this, one of the interviewees replied that births outside marriage were common among very young girls and that putting the child with a maternal uncle, or with the grandparents, increases social stature and allows the mother to go about her life without being punished. (According to certain interviewees [men and women], pressure can be brought to bear on young mothers so that they accept being separated from their child, to the advantage of the maternal uncle or the grandparents.)

Some child transfers among uncles or cousins have no objectives other than to allow the pursuit of secondary or higher studies in Noumea. Transfers to the grandparents, for example, allow the mother to have a paid job. These situations "which involve no legal consequences since in principal they correspond only to a temporary need" are the ones which seem to generate the most difficulties. The resulting situation is unsuccessful, with the child not truly integrated into the host family.

In conclusion of this section devoted to the theoretical presentation of the giving of a child, it is agreed that the role played by the giving of the child expresses the importance of social relations in the Kanak society, just as it reveals family solidarity. It need not be an obstacle in itself, depending on the pain and the difficulties associated with the transfer.

Because of the important changes taking place in Caledonian society today and the huge number of families moving to Noumea, the only real metropolis in the territory, the transfer of children operates within a very particular social framework. It is equally undeniable that the social and cultural upsets encountered by Caledonian society must have had an impact on the form of the transmission of children. One can question the actual internal functioning of the families and the real social status of the adopted child.

The giving of the child is still an ongoing practice in the Melanesian environment. We have been able to view the complexity of giving children through case studies, which helps with regard to the antagonisms between Kanak cultural landmarks and Western influences (urbanization, modes of thinking, the place of the woman and of the child, etc.).

CASE STUDIES: CECILE AND MADELEINE

Here we present two case studies, illustrating the traumatic violence for a mother and her child in the case of adoption that is not prepared, not developed in the family and, therefore, felt as a brutal rupture in the link between the mother and her child. To protect the identity of the families, we have voluntarily changed their real identities.

CECILE

Virginia, Cecile's mother, delivered her baby prematurely at the CHT, and the baby was hospitalized in the Neonatal unit for 2 weeks. Virginia is an unmarried mother and during her stay in hospital received a visit from her brother, Virginia's maternal uncle. He already had a large family but no daughter: he suggested to his wife that they adopt Cecile, which his wife agreed to due to her husband's wishes.

Virginia left hospital to live with her brother and sister-in-law for a few days, and then set out to join her tribe in the north with Cecile, under the pretext that she would return soon to give Cecile to the prospective adoptive family. In fact, Virginia felt terrible pain at the idea of giving Cecile, because even though her personal situation was precarious, she was already attached to Cecile. Virginia had remade her life with another man and was avoiding returning to Noumea. So Cecile was living with her mother's boyfriend, whom she called "papa," and was apparently developing well up until the age of three.

At her maternal grandmother's injunction, Cecile was suddenly sent to her adoptive parents to start school at the age of three, even though she was not expected there. This change and this brutal separation from her mother had multiple consequences for Cecile: regressive behavior, delays in language learning, behavioral problems which caused her adoptive mother to reject her, which was seen as mistreatment: the latter was exposed by the school who introduced a case worker to monitor her at school, and also in the family where they met the genetic mother, the adoptive parents and the child, separately.

So in clinical terms, Cecile poses the problem of the internal psychic conflict linked to the question of customary adoption with a return to her maternal clan, in the fairly common case of a young, single mother raising her child alone. The different internal, psycho affective conflicts found among the three parental protagonists surrounding Cecile can be discussed in the following way.

The Biological Mother

She mainly shows signs of depression, clinically expressed in tears, sadness, aspects of abandonment linked to the loss of Cecile, her object of attachment. This depressive state is for her a source of ambivalence that manifests itself in the following manner: she had great difficulties in separating herself from the child since she did not give Cecile to her adoptive parents until Cecile was three, and the separation was very sudden (it was a neither discussed nor prepared, with an incapacity to represent the state of the child).

Currently, Cecile lives in Noumea with her genetic mother. The risk of another split is obvious in her mother's great difficulty to imagine that she will keep Cecile. Cecile's behavioral troubles, which have in the meantime greatly improved, entail a major affective ambivalence for her genetic mother, resulting in the question: "Will I be able to keep Cecile?"

So the behavior of the genetic mother poses the problem of an affective internal ambivalence linked to the injunction of adoption, a relational ambivalence essentially toward Cecile, but also toward the adoptive parents. This ambivalence is heightened, it seems to us, by a deeper ambivalence to do with cultural representations and the problem of the injunction of adoption. This is reactivated by the mechanical bias of transference and counter transference in psychotherapeutic work with a European therapist.

The Adoptive Mother

We found her to be exercising very codified Kanak notions of authority and of taking the floor. So Cecile's adoptive mother struck us during various interviews with her total absence of expression of her individual desire as to the adoption of Cecile.

It goes without saying that, for the adoptive mother, this situation involved a major ambivalence toward the child, mirroring the genetic mother's ambivalence. These contrary affective movements generate a pathological relationship between the adoptive mother and the child, and could contribute to mistreatment and to reactivating the negative thoughts associated with the break between the real and the imaginary child.

The Adoptive Father

He is positioned next to the case worker, like a co-therapist being at the same time a guarantor of the therapeutic case and the case worker, but also a guarantor of an ethno-psychiatric elaboration through the permanent dialogue that he maintains with customary requests, the family (biological and adoptive mothers) and the therapist.

Cecile

The essentially relational problems mirroring the affective movements of the different adult protagonists translate symptomatically first of all through the following:

behavioral problems (hyperkinesis, instability at school), which were largely improved through the case worker

a major dysphasic language trouble, reflecting the incommunicability among the family surrounding the story of Cecile. Through the case worker, this trouble evolved from a major dysphasia into a simple problem with pronunciation. From speech that was disjointed and barely comprehensible (the effect of a lack of coherence in the family functioning), Cecile moved on to speech that gave the impression of anxiety, but where the search for identity was central

troubles with attachment manifesting in relationships of an abandoned type, with an anxious hyperneediness toward the adoptive mother and other figures of attachment. This behavior was almost absent in the presence of the biological mother.

MADELEINE

Madeleine is half Kanak, half European. She married Albert from Pins Island. Madeleine is already on the margins of Kanak society because she is half European, and because of a higher level of education which allows her to spend some time living in France. Madeleine, having heard about our work on adoption, contacted us not for therapeutic work, but to tell us about her current problems related to giving her daughter 10 years ago, problems she had never spoken of among her family.

Ten years ago, Madeleine devoted herself fully to the joys of motherhood with her little 10-day-old daughter Celia, breast-feeding her, and Celia visibly benefited from this maternal feeding. A very strong bond already existed between Madeleine and Celia.

Her husband suddenly announced that Celia must be given to his brother, who did not have a child. Madeleine tried to delay it because of the breast-feeding. But one Saturday, Celia was suddenly taken by her paternal grandmother, without any relational arrangements. Madeleine had hoped to give Cecile herself on Sunday. For Madeleine, this removal was a violation without precedence, bringing with it a series of posttraumatic symptoms which exist to this day: guilt, obsessive thoughts, conspiratorial rituals, phobias, night stresses caused by the same symptoms, feelings of persecution, finally, symptoms linked to the replacement child. In fact, some months later Madeleine adopted another child from the family, with whom she established extremely close links, which lead to both individual and family work.

THEORETICAL ELABORATION

The different psychopathological elements of these case studies allow us to introduce our subjective elaboration as to the effects of customary adoption in the Kanak milieu: effects linked to the modalities of giving the child and to the cultural representation of illness in the Kanak milieu.

From our clinical observations, from the collection of witness stories (both children and adults) and, finally, from our ethno-psychiatric collaboration, we have concluded that the pathological effects of customary adoption encountered in Kanak children, returned to their clinical expression of general psychopathology (Aussilloux, Raysse, & Baghadu, 1995). The reasons for consultation are various: attitude and behavior problems, speech disorders, depression (either masked or manifest), and so on. It would seem to be more judicious to develop certain aspects of these pathological phenomena in conjunction with the specificities of the Kanak milieu.

Pathological Phenomena in Conjunction with the Specificities of the Kanak Milieu

It seems to us particularly interesting to develop on the notions of incommunicability, of the unspoken in relation to adoption, and the effects of late adoption.

The notion of incommunicability. In many cases in our clinical presentation, we have evoked the absence of discussion and of the unspoken in relation to the giving of children in the Kanak milieu. This recalls the notion of the incommunicable developed by Levine (1996). This author puts forth the hypothesis that the adopted child lives within the framework of adoption reuniting the family territorialization and being preoccupied by four different contradictory, and more or less permanent, desires:

1. the desire to be loyal to the biological parents, which can induce the adoptive family to challenge this;
2. the desire to eliminate the biological parents from the fields of thought, which can lead to a denial of the reality of his or her biological origin, and to considering himself or herself only as a child of the adoptive parents,
3. the desire to live as no one's child,
4. finally, the desire to create oneself in a harmonious and unified fashion in a triple, belonging: the biological parents' families, of the adopters and of the adopted children.

Now, as Levine, says, the child's involvement in the adoptive family depends on the way in which he or she is organized in relation to the family space. In other words, the child will never be totally present in the adoptive family's space: "one part of him, he says, is outside, and engaged in a secret dialogue about the situation. From a much reduced, almost imperceptible zone of incommunicability in certain cases, hypertrophied and inducted into a state of crisis in the other." The state of crisis and the pathological effects that accompany the secret emerge at the same time for the parents. They are managing the psychological situation of adoption: living with discomfort or shame. The child, too, is confronted by this humiliation of one of his or her parents. The orphans, the children of an unmarried mother, of composite or recomposed families, are children for whom the state of crisis (a true crisis cell) grows. Their story is filled with splits, where the attachment process is maltreated. We can conclude that the absence of links, of solid attachments, will allow the zone of incommunicability to grow. Problems with relationships, with socialization, with communication, and with speech in particular (as our case study shows), mean that the child can sometimes take refuge (partial or total) in this evoked "capsule of incommunicability."

For the adopted Kanak child, it seems that this zone of incommunicability still exists, despite a social organization where adoption and the familial links are more explicit: paradoxically, the child retains the most contact with his or her biological mother.

The Unspoken

Parallel to this, a haze of identities is fed by the familial milieu that increases the unspoken from its very origins (e.g., the adoptive mother is called *maman*, the biological mother *tantine* [aunty]). The unspoken is differentiated from keeping the child's origins a secret: when it is a secret, the adoption represents "a knowledge hidden from others," "that which one absorbs, and that which one amputates in a relationship, in a word this is the weight which one puts on it" (Tisseron, 1996).

In customary adoption, the giving of a child can sometimes be nothing more than an act of successful relationship, in the sense where the giving of the child is realized as the basis of an enigmatic and specific disaffiliation which does not make sense: we file this in the case of an unintelligent disaffiliation.

Delayed Adoption

In a certain number of clinical cases the adoptions are made later, despite being planned in the first days after the birth. This is because of a certain number of factors where the difficulty for the biological mother in separating from the child is surely not unknown. In these cases, adoption brings with it a brutal rupture in the link between the mother and the child, under the effect of cultural injunction. We verified here, in the pathologies we met, the conclusions of the study already made by Dumaret, Duyme, and Tomkiewicz (1991) as well as those of Soulé (1995). These studies saw delayed adoption as a situation of risk, resulting in real family links only when extreme caution was exercised, and with the authentic participation of the feeding parents. Otherwise, delayed adoption increases the gap that exists between real child and imagined child for the adopting parents. Their motivation in accepting the child will be dulled, seen as seriously degraded in this context (that is what we saw in Cecile's case).

Evolution of Kanak Society and the Pathological Effects on the Adopted Child

Our subjective elaboration also concerns certain aspects of the evolution of Kanak society in terms of the pathological effects on the adopted child. The giving of a child is complicated today by many factors linked to the Westernization of society:

1. urbanization, or the transfer of families in the tribe to the city leads to increasing ruptures between the adoptive and the biological families (accentuated by being on an island), aggravating the pathological effects of adoption,

2. the nuclear functioning of the urban family, as opposed to the tribal mode of life, sometimes has more influence on family functioning,
3. the hybridization of the cultures leads to a certain interior cohabitation; but, at the same time, it opposes the Kanak and the European modes of representation, and can favor a feeling of ambivalence in the case of customary adoption.

CONSULTING IN CHILD PSYCHIATRY FACED WITH THE REPRESENTATIONS OF THE PROBLEMS IN THE KANAK MILIEU

An objective reading of the pathological effects of adoption must refer to the representations of the problems in the Kanak milieu as conceptualized by contemporary authors such as Christine Salomon (2000). This will enable a better understanding of the role of this culture in child psychiatry consultations.

In the Kanak conception of the world, a specific conceptual category does not exist for problems of behavior, intellectual deficiencies, psychic disorders and all that which, in Western vocabulary, is categorized as "mental illness." As such, all illness, whatever the symptoms (somatic and/or psychical), is perceived as a "disharmony," a "disorder which breaks with the equilibrium with nature." The visible, that could materialize here as a symptom, is only a manifestation of the invisible, knowing that the invisible facilitates the visible. This is why it is better to respect the rules made by custom, seen as religion: in the opposite case, one exposes oneself to put up with something, or one exposes one's children, one's parents, to illnesses "sent" by spirits or ancestors. These illnesses will be interpreted, in general, as the consequence of the transgression of something forbidden in the Melanesian context. The principal cultural basis that emphasizes the representations of illness, according to Salomon, has evolved progressively with the arrival of Christianity and with colonization. According to her, the indigenous typology today will divide illnesses into two main categories, already known in the pre-colonial period. The first is illnesses of the past, which speakers of the Kanak languages still call "indigenous illnesses." This is opposed to illnesses that have appeared since contact with the West, the illnesses of today, which are called "white people's illnesses" or "doctor's illnesses." Meanwhile, only evolution confirms the *a posteriori* diagnosis: a "white person's illness" that the "doctor" correctly diagnoses, can hardly cure a potentially-hidden indigenous illness.

In the vast category of indigenous illnesses, two groups can be distinguished: "true illnesses" sent by the ancestors in return for mistakes committed, and "fabricated illnesses," which refer to practices grouped under the term of *sorcery*. Furthermore, there is a hierarchy between affections that are considered benign and syndromes that are more complex and dangerous, which refer to ancestral forces and which activate the entire social system, those which participate in a more general rhetorical procedure: in these societies one attributes a particularly determinist quality to the origin. In this way, illnesses are commanded by preceding events or powers, which must be referred to in order to compare or treat them. It happens that certain men have the power to communicate between the visible and the invisible, and it is generally best to ask them for guidance in the case of illnesses whose origins are assumed to be "sent by the invisible" following the breach of a taboo.

In this way, illnesses are not interpreted through a static system of symptoms. It is more a comment on the stresses of existence from an argumentative point of view, among which feature the search for historical and social origins of evil, which constitutes a paradigm. Due to the Kanak perception of illness, it is therefore not essential to treat the symptoms but really, before all else, to find the cause. While the Western doctor treats a person with an organic treatment plan, traditional medicine attaches great importance to relationships: the first cause is precisely placed in its location.

It is here that the system of representations becomes compatible with our therapeutic, child psychiatric approach. Even if, in reality, the demand for consultation comes later, after the traditional Kanak doctor has finished, our situation/position allows us to suggest words and representations for the adopted Kanak child and his or her family. To favor expression is one primary way for the child to reclaim the continuity of his or her life. In the same way, to maintain a common dialogue with the adoptive and/or biological parents, founded on reconciliation in the imaginary and in the real, will be a fundamental condition for the child to reintegrate a group mechanism that is reunified, and struggle against the injury of the initial loss of roots.

In this system of representations, the consultant child psychiatric takes the place of the case worker in the broader family, since the "child remains a member of the clan" and is not considered as having a particular status. Therefore, the case worker has a central therapeutic impact and a dynamic and determining role in improving the adopted child's symptoms. This does not exclude the potential for the more classic case worker role for adopted children. According to custom, it turns out that certain members of the family can position themselves as real co-therapists, realizing themselves the link between psychotherapeutic and customary elaboration.

CONCLUSION

The frequency and the specificity of giving children in the Kanak milieu has raised numerous questions among clinicians who work with young children, and who are therefore sensitive to problems of attachment. In a theoretical concern, an anthropological research essentially rests on very diverse accounts (adoptive families, children or adults who were adopted) to show the complexity in the forms of customary adoption. Some of these are much more widespread: the return to the maternal clan with a maternal uncle is one of the more prevalent situations.

We have studied this through case studies that present the problem of the internal psychic conflict linked with the question of customary adoption in the case of "returning to the maternal clan." On a socio-cultural plan, these adoptions integrate themselves into a framework of exchanges in the familial group with the giving of the child to the maternal uncle, true father in the sense of "giver of life" among the Kanak. This type of giving presents itself as essential for effective social planning. It is felt to reinforce membership in the group for both the biological mother and the maternal uncle and his family. As such, it is not likely *a priori* to engender real-life pathology for the parents or for the child.

Moreover, our clinical experience, such as we have practiced it for many years, shows the limits of such an assertion. We explain this in the following manner: if customary adoption is a fact that is "common," socially and culturally, the modalities of its functioning could engender pathological phenomena in the child under certain conditions:

adoption that is not prepared or not psychically accepted by the biological mother and the host family,

delayed adoption and/or adoption with a brutal rupture in the links between biological mother and child due to new modes of social living and changes of environment (as more and more of the tribal populations move toward Noumea and the suburbs), with loss of close landmarks,

Parallel to these climatic factors, we find, in the adopted Kanak child, a list of symptoms from the domain of general psychopathology and, more particularly, some characteristics of clinical statements already described in the case of "plenary" adoptions. Moreover, themes of the unspoken and of incommunicability seem particularly prevalent in the family functioning of the children of customary adoption. This strengthens the family work of sharing and discussing the familial representations and the attached effects.

Therefore, these observations legitimate our interest and our clinical work in certain cases of adoption. It does not only preserve the continuity of the lines and the attachment process for the adopted child. It also opens certain perspectives to work in prevention with methods to develop customary adoption with regard to the psychoaffective needs of the child. Our clinical experience has shown us that dialogue can be open with regard to Kanak cultural functioning.

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Chapter 10

PSYCHOEDUCATIONAL EARLY PARENTING INTERVENTIONS TO PROMOTE INFANT MENTAL HEALTH

Jane Fisher, Colin Feekery, and Heather Rowe

> The birth of a baby demands dramatic adaptation of women. In becoming a mother a woman has to relinquish, at least temporarily, her personal liberty, autonomy, occupational identity, capacity to generate an income and social and leisure activities in service of infant care. The adaptation to new required roles, major responsibilities, generational shift, multiplication of the unpaid workload, and, for some, harm to bodily integrity through unexpected adverse reproductive events places great demands on individual psychological resources and existing relationships. Psychological disequilibrium is normal during life transitions and in adaptation to change. However, there is now general agreement that mental health can be compromised in women during pregnancy and after childbirth. (Fisher, Cabral de Mello, & Isutzu, 2009, p. 15)

After birth, infants are entirely dependent on their caregivers, most usually their mothers, for provision of nutrition, physical care, comfort, social interaction, and safety. In addition to food, a clean environment and access to health care, infants require sensitive and responsive caregiving to survive and develop. Effective care involves an emotionally available caregiver who establishes a mutually rewarding and affectionate relationship with the infant. Day-to-day interactions between primary caregivers and babies influence the infant's neurological, cognitive, emotional, and social development. Caregiver sensitivity and responsiveness involve observing infant cues, interpreting what these indicate, and acting consistently, contingently, and effectively in response (Eshel, Daelmans, de Mello, & Martines, 2006; Richter, 2004).

There is an international need for evidence-based enhancement of routine perinatal health care and specialized interventions to promote optimal psychological functioning and caretaking capacity in women. We argue that a psychoeducational approach which is defined as a well-theorized and highly structured method which aims to augment emotional literacy; offers specific learning opportunities and supported exposure to anxiety-arousing stimuli; challenges stereotypes using cognitive restructuring; and provides new knowledge to assist problem solving, improve self-efficacy and sense of competence, has promise as a way of improving maternal psychological functioning and caretaking capacity and thereby promoting infant mental health. In this chapter we will illustrate this approach with evidence from a unique Australian service: residential early parenting centers, drawing in particular on the experiences of JF and CF, clinicians since 1996 at the Masada Private Hospital Mother Baby Unit (MPHMBU).

NATURE, PREVALENCE, AND RISKS FOR MENTAL HEALTH PROBLEMS IN MOTHERS OF INFANTS

This approach is based on a social model of perinatal mental health problems in women (Fisher et al., 2009). The predominant focus of the substantial research, policy initiatives, clinical practice recommendations and health education of the past five decades has been on postnatal depression, but there is increasing evidence that postnatal anxiety disorders are at least as common, but less well recognized than depression (Wenzel, Haugen, Jackson, & Brendle, 2005). Brockington (2004) concludes that women identified through screening as being depressed actually have heterogeneous conditions including posttraumatic stress disorder, panic, phobic, obsessional and generalized anxiety disorders, adjustment reactions and depression. These are situation-focused, disabling, and often reflect adversity. Even among those who meet diagnostic criteria for major depression, severity ranges from mild to severe and most depression after childbirth is minor and not major (Austin, 2004). This is reflected in widely divergent estimates of prevalence for probable depression as assessed by the Edinburgh Postnatal Depression Scale (EPDS) (Cox, Holden, & Sagovsky, 1987) and for diagnoses of postnatal generalized anxiety disorder in high-income countries (Halbreich & Karkun, 2006; Ross & McLean, 2006). Rates of depression appear to be substantially higher in resource-constrained low- and lower-middle-income countries (Fisher et al., 2009).

If depression and anxiety were biologically caused it would be expected, as is the case with schizophrenia, that prevalence would be similar in all settings and countries. This variation in prevalence estimates suggests strongly that social and cultural circumstances are the predominant determinants of perinatal mental health problems in women (Halbreich & Karkun, 2006). Confirmatory evidence of this explanatory system is provided by Chen, Subramanian, Acevedo-Garcia, and Kawachi (2005) who undertook a multilevel analysis of self-reported depression symptoms collected from more than 7,700 mothers and publicly available data from the 50 American states in which they lived. Women who lived in states in which female political participation was high, reproductive rights recognized and employment and economic autonomy assured had significantly lower average levels of depressive symptoms than others. It was concluded that as there is no basis to presume that women in general are biologically or psychologically different between states, that social determinants outweigh both intrinsic biological and individual psychological factors in explaining gender differences in rates of depression.

Systematic reviews conclude that there are moderate to strong associations with four risk factors for postnatal depression: a past history of psychiatric disorder, coincidental adverse life events, low social support and a poor marital relationship (Scottish Intercollegiate Guidelines Network, 2002).

Although the quality of relationship with the intimate partner is consistently found to be linked to perinatal mood in women, there is little exploration in the literature of what this means in terms of day-to-day interactions between partners. Women who experience their partners as welcoming the pregnancy, and providing empathic support and encouragement, have better mood (Morgan, Matthey, Barnett, & Richardson, 1997). There is ample evidence that the experience of criticism, coercion, control, humiliation or verbal or physical violence in an intimate relationship perpetrated by a partner on whom an individual is dependent is causally linked to the development of depression and anxiety in women. Boyce, Hickie, and Parker (1991) found that women whose intimate partnerships are characterized by high levels of control and low levels of care are at increased risk of developing postpartum depression, but fear of intimidation or actual experience of abuse were not ascertained.

There is less consistent evidence for other risks including: unintended pregnancy, unemployment, not breast-feeding, characteristic coping style, a longer than average time to conception, (Scottish Intercollegiate Guidelines Network, 2002), operative interventions in childbirth and persistent poor physical health (Brown & Lumley, 2000). As yet, there is little evidence about risks for postnatal anxiety disorders, but a personal history of anxiety and low socioeconomic status have been implicated (Wenzel, Haugen, Jackson, & Brendle, 2005).

Profound fatigue is widespread among mothers of newborns but is often normalized or trivialized, despite the adverse impact it exerts on normal daily functioning (Milligan, Lenz, Parks, Pugh, & Kitzman, 1996). It has been regarded as symptomatic of depression, but an alternative view is that it arises because the unpaid workload of mothering a newborn is severely underestimated. Vital exhaustion may be a precursor for the development of depression in women whose unpaid workloads are neither acknowledged nor shared (Fisher, Feekery, & Rowe-Murray, 2002).

Postpartum affective disturbance is characterized by social withdrawal, increased irritability and agitation. Women with postpartum depression can be less accepting of and sensitive, warm and responsive to their infants. Poor maternal mental health is thought to reduce caregiving sensitivity and responsiveness through neglect or inaccurate interpretation of infant cues, developmentally inappropriate expectations, and hostile, irritable, or inconsistent responses (Murray & Cooper, 1997).

NATURE AND PREVALENCE OF UNSETTLED INFANT BEHAVIOR

Infant Sleep and Settling Difficulties

Difficulties in settling to sleep, waking after very short sleeps and frequent overnight waking are common problematic behaviors in infants. Hiscock and Wake (2001) surveyed 738 mothers of 6- to 12-month-old infants attending for routine infant health checks in middle-class areas of Melbourne, Australia. Of these, 46% described a sleep problem including cosleeping, being dependent on suckling to go to sleep, prolonged time to settle, frequent overnight waking and prolonged crying associated with nighttime waking and short daytime sleeps. Infant sleep problems were associated with maternal symptoms of depression when other risk factors were controlled. In community cohorts 20% of one-year-olds still wake overnight and, if untreated, in half this can persist through the preschool years (Morrell, 1999). Children with sleep problems are also more likely to have daytime behavior disturbance and temper tantrums.

The causes of infant sleep difficulties are not clear. It is known that waking and resistance to settling frequently co-occur (Weir & Dinnick, 1988). Both infant and parent factors appear to be involved in the development and maintenance of dysregulated sleep. Infants with the temperamental characteristics of a low threshold to arousal; intense reactions to unfamiliar stimuli and high levels of motor activity are more likely to have poor quality and dysregulated sleep (Burnham, Goodlin-Jones, Gaylor, & Anders, 2002; Morrell, 1999). Burnham, Goodlin-Jones, Gaylor, and Anders (2002) found wide variation in sleep-wake patterns and self-soothing capacity in a longitudinal study of 80 infants from early infancy to the age of one year. In general infants increased the longest sleep period over the course of the first year, but in some it remained constant (Burnham et al., 2002). In 57% of their sample the number of self-soothed awakenings increased across the first year, but in 43% it decreased. Infants placed awake in bed were most likely to learn to self-soothe and more likely to have longer continuous sleep periods.

Associations have been described between infant sleep dysregulation and perinatal complications, including premature and operative birth and with a crowded or impractical domestic environment and the lack of consistent bedtime routines. Infant sleep is also influenced by parental caretaking with practices such as co-sleeping, rocking, or cuddling to sleep, offering overnight milk feeds, and parental presence until the infant is actually asleep being associated with greater likelihood of sleep difficulties (Morrell, 1999). Nikolopoulou and St. James-Roberts (2003) investigated early identifiers of disturbed sleep in a community cohort of more than 1,700 infants born in one English county hospital. Babies who had more than 11 feeds in 24 hours at one week of age were less likely to sleep through the night at 12 weeks of age than infants who had fewer feeds.

Infant Crying and Irritability

Crying is normal in infants and there is wide individual variation in the amount and intensity of crying and fussing in the first year of life. Definitions of problematic infant crying vary, but characteristics often include prolonged and intense crying accompanied by apparent physical discomfort, including grimacing and leg flexing. Rather than being categorized as pathological or normal, Wolke, Gray, and Meyer (1994) conceptualize problematic crying as the upper end of a continuum. Infant crying is highly arousing to caregivers, and parents often seek help when they feel unable to comfort or soothe their infants (Oberklaid, 2000). Excessive crying occurs in 10 to 30% of infants in the first three months of life (Beebe, Casey, & Pinto-Martin, 1993). Clinicians can feel obliged to diagnose an organic basis to prolonged infant crying, the most common being colic, gastroesophageal reflux or infant allergy (Armstrong, Previtera, & McCallum, 2000; Wolke et al., 1994). Medical treatments can include the use of antireflux medications, low-allergy diets for breast-feeding mothers or hypoallergenic infant formulas. However, these treatments have limited effect and prolonged or inconsolable crying can continue. It is recommended that assessment should always include consideration of the familial and social context in which it occurs, in particular of the adequacy of parental support and the presence of coincidental adverse life events (Craig, Gilbert-Macleod, & Lilley, 2000).

Parents are often encouraged to distinguish infant cries and discern whether they are indicating pain, hunger, a startle reaction or fatigue. However, there is little empirical evidence that these cries are in fact specific or distinguishable and in reality parents have to use other contextual and behavioral factors to decode them (Craig et al., 2000). Mothers most usually attribute infant cries to hunger (Craig et al., 2000) and the widespread contemporary advice to mothers to "feed on demand" may promote the notion that infants only cry when hungry. Contrary to explanatory models which attribute infant behavior predominantly to their experiences of care, excessive prolonged inconsolable infant crying is usually difficult to explain and in systematic investigations has not been found to reflect pathological care taking or an abnormal familial environment (Barr & Gunnar, 2000). It is also often presumed to be secondary to gastrointestinal pain, but experimental investigations have found that it rarely reflects gastrointestinal pathology and investigators conclude that it may be the first indicator of a difficult temperament (Barr & Gunnar, 2000).

Beebe, Casey, and Pinto-Martin (1993) surveyed 75 mothers (average age 28 years) attending a clinic with their four- to six-month-old infants for routine health checks. Of these, 23% reported that their infants cried for more than three hours per day. Young mothers (aged ≤18 years) and those without private health insurance were more likely than the others to report prolonged crying, but prematurity, operative birth, whether the infant was a first or subsequent child and the mother was single or partnered were not associated. Mothers of the infants who cried excessively reported significantly more parenting stress, less sense of competence and efficacy and that they did not experience their infants as a source of positive reinforcement. Excessive, inconsolable infant crying and resistance to comforting has been associated with earlier cessation of breast-feeding, frequent changes of infant formula, maternal irritability, poorer mother–infant relationship and heightened risk of infant abuse (Wolke et al., 1994).

Breast-feeding Difficulties

Rates of initiation of breast-feeding have increased in the last four decades and most Australian women (82%) leave maternity hospital breast-feeding. However, breast-feeding rates decline rapidly with 63% of infants fully or partially breastfed at three months and only 46% at six months postpartum. Socially disadvantaged mothers are least likely to continue breast-feeding (Donath & Amir, 2000). Difficulty with breast-feeding rather than maternal choice is a major reason for discontinuation (Barber, Abernathy, Steinmetz, & Charlebois, 1997). Infant feeding difficulties frequently co-occur with dysregulated sleep and persistent crying. In addition to difficulties in establishing breast-feeding the most common infant feeding problems are: refusal of breast, bottle or solid foods; insufficient supply of breast milk and failure to gain weight. Prolonged infant crying contributes to early cessation of breast-feeding, and early introduction of solid food (Armstrong, O'Donnell, McCallum, & Dadds, 1998).

INFANT BEHAVIOR AND MATERNAL MENTAL HEALTH PROBLEMS

Most investigations in this field have presumed that infants' behavior reflects parenting factors; in particular that prolonged infant crying is a consequence of maternal depression. Few have acknowledged that the relationship might be reciprocal and that infant behavior might exert an adverse effect on a mother's confidence and affect (Murray & Cooper, 1997).

Disturbed infant sleep and the associated unsettled behavior exert an adverse effect on family functioning, including at worst child abuse (Armstrong et al., 1998). Hiscock and Wake (2002) conducted a randomized controlled trial of an outpatient educational intervention with 156 mothers with infants with a sleep problem selected through their community survey and found that both infant sleep and maternal depressive symptoms improved. We argue that unsettled infant behavior can corrode maternal confidence, contribute to severe occupational fatigue and can thereby increase likelihood of maternal mental health problems (Fisher, Feekery, & Rowe-Murray, 2002). Infant behavior, especially prolonged inconsolable crying, frequent nighttime waking, short daytime sleeps and feeding difficulties are very common reasons for mothers of infants to seek help (Morrell, 1999; Oberklaid, 2000).

Parents have a complex psychological task to balance the needs and rights of their infants with their own. Overall, attribution of the origin of early parenting difficulties to either parents or infants is less salient than the provision of effective early interventions that benefit parents, infants and their interaction and ongoing relationship and can prevent the development of later behavioral and emotional problems in children and adolescents. Public health approaches to early intervention focus on the modification of risk and protective factors and have important implications for the promotion of maternal and infant health. Some risk factors for perinatal mood disorder like past history of psychiatric illness and co-incidental adverse life events are not easily modified. We argue that other factors are more readily modified and constitute promising entry points for intervention. Women's intimate relationships with their partners and their infants are linked to their mental health and are potentially amenable to enhancement through psychoeducational approaches that focus explicitly on the needs of mother, infant, and father and their interactions with each other.

PSYCHOEDUCATIONAL RESIDENTIAL EARLY PARENTING PROGRAMS FOR MATERNAL MENTAL HEALTH PROBLEMS, UNSETTLED INFANT BEHAVIOR, AND PARENT—INFANT RELATIONSHIP DIFFICULTIES IN AUSTRALIA

Australia has a two-tier health system. All medical consultations and outpatient services are funded to an agreed level by the national Medicare scheme. This also supports a universal access public hospital system in which treatment is provided without fees. Individuals may also elect to purchase private health insurance that enables them to be treated by medical practitioners of their choice in private hospitals. Residential early parenting services (REPS), which provide brief admissions to mothers with their infants or young children for assistance with difficulties in caregiving, or behavior management, appear to be unique to Australia.

The public access REPS are in freestanding facilities. Many originated early in the 20th century as institutions for the care of abandoned or mistreated young children, and infants relinquished for adoption. Services have adapted to changing social practices and family needs and they now provide structured day attendance and residential programs to women and men experiencing early parenting difficulties and their infants. Each Australian state has at least one, and some states have more than one early parenting service. They provide accommodation in family rooms for parents and their infants and other young children. About 10 families are admitted each week to four- or five-night REPS programs. Some of the public REPS have an additional statutory obligation to provide a 10-day parenting skills program for families in which a risk of child abuse has been identified by child protection authorities (Queen Elizabeth Centre, 2003). They are staffed by nurses with diverse qualifications and skills, some also have allied health practitioners including social workers and clinical psychologists and some have visiting general practitioners.

There are a few private early parenting services, but not in all states. Most are located in the maternity sections of suburban private hospitals and can accommodate five to six mother–infant dyads who are admitted by general practitioners. The private centers are staffed by multidisciplinary teams which include these practitioners, nurses qualified in midwifery, maternal and child health care and/or psychiatry and sessional specialists including in pediatrics and clinical psychology. Some nurses are also lactation consultants. Consultation-liaison specialist psychiatry, gynecology and physiotherapy services are accessible. Mothers and infants must have a diagnosable condition, be referred by a doctor and have private health insurance or capacity to pay for the admission.

The public access services have some provision to admit fathers with their partners and infants. However, in the private services, only the primary caretaker, almost invariably the mother and the infant can be admitted. Fathers are able to stay overnight as boarders in most services and there is recognition of the need to make the programs accessible and relevant to fathers.

In common with many clinical services, REPS developed before evidence-based practice was the norm and practice was based predominantly on clinical experience. Evidence about the nature of presenting problems in women seeking admission with their infants and prospective follow-up of admitted cohorts has been generated over the past decade. As yet however, there are no systematic data about the needs and experiences of men whose partners and infants have been admitted to these services.

MATERNAL HEALTH AND CIRCUMSTANCES

Eight surveys of consecutive cohorts of women admitted to Australian REPS have been reported (Armstrong et al., 1998; Barnett, Lochart, Bernard, Manicavasagar, & Dudley, 1993; Fisher, Feekery, & Rowe 2002; Harris, 1992; Leeson, Barbour, Romanuik, & Warr, 1994; McMahon, Barnett, Kowalenko, Tennant, & Don, 2001; Phillips, Sharpe, & Matthey, 2007; Rowe, Fisher, & Loh, 2008) (see Table 10.1). These found high rates of clinically significant symptoms of depression.

Overall therefore, while this body of data is small, there are consistent findings that a large proportion of women admitted to early parenting services are probably clinically depressed and some evidence that anxiety and clinically significant occupational fatigue are common.

Table 10.1
Clinically significant depressive symptoms in consecutive cohorts of women admitted to residential early parenting services

Study	*Early parenting service*	n	*Clinical symptoms*
Harris (1992)	Karitane, New South Wales	92	41%[a] EPDS > 12
Barnett et al. (1993)	Karitane, New South Wales	100	39% EPDS > 12
Leeson et al. (1994)	Torrens House, South Australia	20	70%[b] CES-D >16
Armstrong et al. (1998)	Riverton Centre, Queensland	47	60% EPDS > 12
McMahon et al. (2001)	Tresillian, New South Wales	72	36% EPDS > 12
Fisher et al. (2002b)	Masada Private Hospital Mother Baby Unit (MPHMBU), Victoria	109	48% EPDS >12 45%[c] PoMS T-A ≥ 20 91%[c] PoMS F-I ≥ 13
Phillips et al. (2007)	Karitane New South Wales	167	33% EPDS > 12
Rowe et al. (2008)	MPHMBU and Tweddle Child and Family Health Service, Victoria	145	46% EPDS >12

[a] Edinburgh Postnatal Depression Scale (Cox et al., 1987).

[b] Centre for Epidemiological Studies Depression Scale (Radloff, 1977).

[c] Profile of Mood States, Tension-Anxiety and Fatigue-Inertia Subscales (McNair et al., 1981).

Infant Health and Behavior

Problematic infant behavior is the most common reason for assistance to be sought from early parenting services. In Barnett et al.,'s (1993) study, 96% of the infants had feeding difficulties, periods of inconsolable crying or dysregulated sleeping, either singly or in combination. Participants in Leeson et al.,'s (1994) study kept infant behavior diaries prior to admission which showed that these babies woke frequently to have an average of seven milk feeds overnight and resisted being settled. At Riverton, a service in Brisbane, 72% of the infants woke more than three times per night and 83% slept for less than two hours during the day (Armstrong et al., 1998). Don, McMahon, and Rossiter (2002) collected 24-hour infant behavior charts from 109 mothers one week prior to admission to the Tresillian unit in Sydney. On average the infants cried and fussed for 3.6 hours in 24 hours. Fisher, Feekery, and Rowe (2004) reported on two groups of infants (*n* = 58 and *n* = 59) admitted aged 4–12 months to MPHMBU and most had dysregulated behavior including waking more than twice overnight (66%, 64%) rarely or never self-settling overnight (90%, 93%) and total daytime sleep less than two hours (55%, 78%). A third had feeding difficulties, including refusal of breast, bottle or solid foods or mothers had an insufficient supply of breast milk. The mothers of one of these groups completed 24-hour infant behavior diaries and on average the babies cried or fussed for 2.5 hours in 24 at admission. Diagnoses of gastroesophageal reflux had been made in 16% of the infants in the Leeson et al. (1994) and a third of those in the Fisher et al. (2004) cohorts.

The Australian Revised Short Infant Temperament Questionnaire (Sanson, Prior, Garino, & Oberklaid, 1987) was used to assess temperament in infants aged over four months in three cohorts (Fisher et al., 2004; McMahon et al., 2001). It is a 30-item standardized parent-completed scale which yields scores on five temperament factors: Approach-Withdrawing (AW), Rythmicity-Arrythmicity (RA), Cooperation-Manageability (CM), Activity-Reactivity (AR), and Irritability (I). Higher scores indicate more problematic behavior. A three factor composite Easy-Difficult score is computed as the sum of the AW, CM, and I subscales. Mothers' and maternal and child health nurse's independent assessments of infants are highly correlated on the Easy-Difficult scale, indicating that it is reliable and does not just reflect maternal perceptions (Sanson, Prior, Garino, & Oberklaid, 1987). The two infant cohorts studied by Fisher et al. (2004) were significantly less approachable, more irritable and more difficult than population norms at admission. The 72 first-born infants in the McMahon et al. (2001) study were assessed after completing the residential early parenting treatment program and were significantly more irritable and less manageable than the 58 comparison infants.

Correlates of Maternal Mood

Only a few of these studies investigated the characteristics of the more seriously from the less seriously disturbed or from the general population. Comparison groups, when used, differed from the admitted group in ways that might have influenced the conclusions. Despite these limitations, some evidence is available.

There appear to be higher than population prevalence rates of rare or adverse perinatal outcomes and many women had experienced serious reproductive health problems. These included ectopic pregnancy and subsequent loss of a Fallopian tube (Barnett et al., 1993; Fisher, Feekery, Amir, & Sneddon, 2002); previous stillbirth or neonatal death (Barnett et al., 1993; Fisher, Feekery, Amir et al., 2002); infertility and assisted conception (Barnett et al., 1993; Fisher, Feekery, Amir et al., 2002; Fisher, Hammarberg, & Baker, 2005); cesarean birth (Barnett et al., 1993; Fisher, Feekery, Amir et al., 2002; Leeson et al., 1994) and multiple birth (Barnett et al., 1993; Fisher, Feekery, Amir et al., 2002; Harris, 1992). In the Fisher, Feekery, Amir et al., (2002) study many women (52%) perceived their postnatal obstetric care as having been unsatisfactory in providing postbirth pain control, breast-feeding education, sufficient rest and a long enough stay. Breast-feeding problems were common (29% had experienced mastitis).

Many women report a problematic relationship with the intimate partner (Barnett et al., 1993; Fisher, Feekery, & Rowe-Murray, 2002), including feeling unable to confide in them, and that the work of infant care is not shared fairly. Partner availability is limited by working hours that greatly exceed the community average (Fisher, Feekery, Amir et al., 2002). Barnett et al. (1993) found that "conflict with the partner" was more common in women with EPDS scores > 12 than < 12. Fisher, Feekery, Amir et al. (2002) and Fisher, Feekery, and Rowe-Murray (2002) found that compared to women who were only fatigued, those who were probably depressed experienced their partners as more controlling. All participants who reported experiencing physical violence in the previous year had EPDS scores in the clinical range (Fisher, Feekery, & Rowe-Murray, 2002).

Childhood experiences of abuse were not associated with severity of presenting difficulties, but were prevalent in the cohorts in which they were assessed. At Tweddle Child and Family Health Service (TCFHS) one quarter (*n* = 19, 25%) of women reported having been physically abused during childhood, and almost as many (*n* = 17, 22%) reported experiences of sexual abuse during childhood. Eight women (10%) reported experiences of both physical and sexual abuse during childhood (Rowe & Fisher, in press). At MPHMBU women who recalled their childhood relationship with their own mothers as having been emotionally cold and unresponsive were more likely to be in the probably depressed than the only fatigued group.

Problematic social circumstances were reported by many women. Fisher, Feekery, Amir, et al. (2002) found that more than half report coincidental adverse life events including serious financial problems, insecurity of partner's employment, or bereavement or illness in a close family member. There were high rates (58%) of recent immigration and/or intercity relocation and concurrent home renovation which may have contributed to social dislocation. However, they reported lower rates of personal and family history of psychiatric disorder than populations admitted to psychiatric services with severe postpartum psychiatric illness (Fisher, Feekery, Amir, et al., 2002).

In the Armstrong et al., (1998) case control study, women admitted to Riverton had infants with worse sleeping difficulties and higher scores on the EPDS than a community comparison group. Similarly, mothers whose infants had difficult temperaments had significantly higher anxiety symptom scores in the McMahon et al., (2001) cohort.

In our study of women admitted to MPHMBU (Fisher, Feekery, & Rowe-Murray, 2002), univariate tests confirmed that diverse factors appear to be related to severity of mood disturbance in a graded relationship (see Table 10.2).

Multivariable analyses were conducted to identify which constellations of these factors distinguished between the three groups. Compared to those who were just fatigued, women who were fatigued and anxious had persistent worry about capacity to care for their infants, limited trust in their partners and disappointment about childbirth, mostly because of cesarean birth. The probably depressed group was distinguished from the group who was only tired by their infants having prolonged inconsolable crying and partners displaying a lack of empathy, and being critical about her management of the household and the baby (Fisher, Feekery, & Rowe-Murray, 2002).

REPS are not designated as psychiatric facilities and psychiatric diagnoses are not in general applied to women admitted for care. However, these data demonstrate that women admitted to these services have complex mental health problems including depressive, anxious and fatigued states (Barnett et al., 1993) and up to half meet diagnostic criteria for a nonpsychotic common mental disorder (Rowe, Fisher, & Lowe, 2008). Others are experiencing nonspecific psychological symptoms including features of grief and trauma reactions and severe occupational fatigue is widespread and disabling (Fisher, Feekery, & Rowe-Murray, 2002). Their infants have unsettled behavior, dysregulated sleep, frequent nighttime waking, inconsolable crying, resistance to soothing, and feeding difficulties (Fisher & Rowe, 2004; Fisher et al., 2004). Confidence in infant caregiving capacity is diminished. It is not possible in cross-sectional studies to ascertain the direction of the relationship between maternal distress and infant behavior disturbance, but the well-being of mother and infant are likely to be reciprocally related.

Mother–Infant Relationship and Interaction

None of these studies assessed the quality of relationship between mother and infant formally, but less than a third of the mothers admitted to MPHMBU felt confident about their capacity for infant care on admission.

Table 10.2
Comparison of factors associated with psychological distress in women at MPHMPU

	Fatigued only (n = *37*)	*Fatigued and distressed* (n = *35*)	*Probably depressed* (n = *28*)	p *Value*
Unwelcome pregnancy	3% (1/37)	14% (5/35)	29% (8/28)	$\chi_2^2 = 8.9, p = 0.01$
Childbirth worse than expected	19% (7/37)	43% (15/35)	43% (12/28)	$\chi_2^2 = 6.0, p = 0.05$
Disappointing childbirth experiences	22% (8/37)	51% (18/35)	43% (12/28)	$\chi_2^2 = 7.2, p = 0.03$
Poor self-rated maternal health	46% (17/37)	63% (22/35)	79% (22/28)	$\chi_2^2 = 7.2, p = 0.02$
Poor breast-feeding advice	19% (7/37)	37% (13/35)	11% (3/28)	$\chi_2^2 = 6.7, p = 0.04$
Anxious about infant care at discharge from maternity hospital	49% (18/37)	57% (20/35)	79% (22/28)	$\chi_2^2 = 6.1, p = 0.04$
Current anxiety about infant care	24% (9/37)	54% (19/35)	75% (21/28)	$\chi_2^2 = 16.9, p < 0.001$
Unable to settle the baby	8% (3/37)	17% (6/35)	39% (11/28)	$\chi_2^2 = 10, p = 0.007$
Insufficient practical assistance	38% (14/37)	57% (20/35)	68% (19/28)	$\chi_2^2 = 6.1, p = 0.05$
Dissatisfied with assistance	32% (12/37)	37% (13/35)	71% (20/28)	$\chi_2^2 = 11.1, p = 0.004$
Unable to confide in partner	22% (8/37)	49% (17/35)	54% (15/28)	$\chi_2^2 = 8.4, p = 0.02$
IBM Care (mean, [95% CI])	30.2 [27.9–32.5]	26.8 [24.3–29.3]	24.2 [20.2–28.2]	$F_{2,97} = 4.6, p = 0.01$
IBM Control (mean [95% CI])	5.7 [4.1–7.4]	6.9 [5.0–9.0]	12.7 [9.1–16.4]	$F_{2,97} = 9.2, p = 0.001$
VPSQ Vulnerability Score (mean [95% CI])	15.5 [13.9–17.2]	16.9 [15.3–18.5]	19 [17.1–20.9]	$F_{2,97} = 4.1, p = 0.02$
PBI Care (mean [95% CI])	25.4 [23.3–27.5]	22.9 [20.5–25.2]	20.5 [17.2–23.9]	$F_{2,97} = 3.7, p = 0.03$

Note: Abbreviations are as follows: IBM, Intimate Bonds Measure (Wilhelm & Parker, 1988); PBI, Parental Bonding Instrument (Parker & Brown, 1979); VPSQ, Vulnerable Personality Style Questionnaire (Boyce et al., 2001).

Barnett et al. (1993) argue that given the complex circumstances in which these mothers and infants are living mother–infant interaction is highly likely to be problematic.

Program Content and Structure

Programs vary to some degree between centers, but all provide structured multicomponent four- or five-night interventions to address both infant and maternal needs.

Infant

Individualized age-specific strategies based on parental reports of presenting problems and staff observations are used to foster more settled infant behavior. These aim to assist families to establish a sustainable daily three- to four-hour-long “feed, play, sleep” routine of daytime care. There is a separate focus on each of these elements. Strategies to promote sleep include educating parents about infant sleep needs, states of sleep, sleep associations and recognition of behavioral cues of tiredness. Unsustainable sleep associations including suckling, rocking, walking, and being carried are reduced, and more sustainable ones like transitional objects, a wrap or sleeping bag, and predictable settling routines are promoted. Mothers are shown how to identify infants’ behavioral signs of tiredness, for example, eye rubbing, ear pulling, and persistent grizzling occurring after the baby has been awake for 1.5–2 hours. Babies are put to bed while still awake, and structured low stimulus comfort (e.g., rhythmic “heartbeat” patting, gentle body rocking) without making eye contact are provided until the baby is quiet. The infant is put to bed in a room that is dark and, apart from a transitional object like a small soft toy, there are minimal distractions in or over the bed. It therefore comes to be recognized as a safe sleeping place, but there are no confusing cues marking it as a place for play. Infants who wake after a single sleep cycle of 40–50 minutes are resettled to sleep using the same comfort strategies, without being lifted from bed. Babies over six months are offered independent opportunities to practice going to sleep for two minute, progressing to four- and six-minute intervals with adult reassurance at each interval (Matthey & Speyer, 2008).

Feeds are offered on waking, with the nature of the feed tailored to infant age and developmental stage. Individualized assistance is provided when needed with infant feeding. Breast-feeding difficulties including attachment to the nipple; adequacy of supply of breast milk; frequent small breast-feeds; and mastitis and breast or nipple pain, which are common and treated with recommended best practice. Maternal anxiety is often focused on whether the volume of breast milk or formula is sufficient, the appropriate age at which to introduce solid food, and what foods should be offered and in what form. In this circumstance, staff model infant feeding skills, including ensuring that infant cues of interest and readiness to eat are observed and that teats and spoons are not forced into the infant's mouth.

Encouragement is given to separate feeding from sleeping with a play period in which mother and infant engage in age-appropriate activities together. Some structured mother–infant interaction activities including sessions on infant massage are offered, and at other times mothers are encouraged to be on the floor with their babies and permit infant initiated interactions to occur. Play periods can also be used to go for a walk with or bathe the baby.

Nursing and other staff provide active guidance and supportive feedback in all their interactions with mothers and their infants. These aim to increase the mother's awareness and appreciation of her infant's developmental capacities and needs and promote accurate interpretation of infant cues. Opportunities are also taken to assist the mother to be empathic to her infant's internal state and mindful about the baby's interests, needs, and the meanings of their responses. These can promote emotional literacy through providing language and explanatory models that might be new to the mother.

Mother

Interventional approaches for women include both individual and group activities. In services with a medical officer, maternal physical health problems are assessed and treated and referral to appropriate specialist services made if needed. Many women have become hypervigilant and most are clinically exhausted (Fisher, Feekery, & Rowe-Murray, 2002). In some services staffing is increased for the first 48 hours of the admission so that mothers are freed from some of the work of infant care and can rest and take daily exercise.

Maternal psychological functioning is observed and reviewed daily by nursing staff, and most services use a self-report measure like the EPDS (Cox et al., 1987) to assess mood at admission or in a preadmission visit. The clinical psychologist or other consultation-liaison mental health professional assesses those who are most distressed. In most services one member of the nursing staff is assigned to each mother–infant dyad during the daytime shifts and, in addition to guiding infant care, spends at least half an hour in individual nondirective supportive listening sessions to assist the mother to identify the predominant concerns in her current predicament and to explore alternative solutions.

Infant crying is a powerful anxiety-arousing stimulus, and many women admitted to these services have established patterns of avoiding infant crying, perhaps as an anxiety-reducing mechanism. Many presume that each time the infant cries a breast or bottle feed has to be offered. When this ceases to be effective the crying infant has frequently been carried, rocked, put into the car for long drives, taken for walks, or offered stimulating activities as distractions. Admission is usually sought when frequent waking, persistent crying, and resistance to soothing are well established.

The psychoeducational approach in these services promotes cognitive- rather than emotion-focused responses to infant crying. Accepting that cries cannot be readily understood, mothers are assisted to use contextual cues to recognize babies' crying, and to interpret the different intensity of infant cries. They have often been insufficiently aware of infants' capacities to tolerate stimulation and been unable to recognize tired cues or appreciate needs for sleep. Many babies have been overstimulated and are underslept, and much persistent infant crying reflects these states (Fisher & Rowe, 2004). Mothers are assisted to take a solution-focused approach to infant crying with active strategies, including if their babies are tired, to settle them to sleep. This is a challenging experience and mothers are given focused individualized support to observe and practice settling their babies using calming, low stimulus interactions, predictable presettling routines, soothing sounds, rhythmic patting and body rocking, learning when to leave and when to reenter the baby's room and how to respond if the baby wakes after a single sleep cycle.

In many centers a formal group meeting for women is held each morning. Some are specific educational sessions covering relevant aspects of infant development including needs for stimulation, soothing and sleep; strategies for comfort and containment, and approaches to balancing infant needs and rights with those of other family members. Other groups are less structured, therapist-led opportunities for reflection on adjustment to parenthood. An approach is used that acknowledges the unrecognized losses associated with motherhood, identifies how established conceptualizations of work fail to appreciate the poorly defined, isolated, constant work of mothering infants, and recognizes that the occupational fatigue of this work is often trivialized and normalized. Strategies to renegotiate the division of the unpaid workload of domestic labor and infant care with partners and others are discussed. Women are encouraged to build collegial relationships with other mothers of infants of the same age in their local communities through participation in formal and informal meetings.

The social milieu of completing the program with a small group of other women at a similar life stage and in comparable predicaments is of therapeutic importance. All services have a day room and women are encouraged to eat their meals together, to feed their babies together and to spend time in informal conversation rather than being alone in their rooms. This provides repeated opportunities to observe each other's babies and to discuss responses to them, as well as opportunities to experience peer support in learning new skills of infant care.

PARTICIPATION OF PARTNERS

The participation of fathers in these programs varies between services. Some are accredited to admit whole families, including the non–primary care provider parent and older children (Fisher & Rowe, 2004). In other services, fathers are encouraged to attend some of the educational groups and to take the opportunity to practice infant settling with the support of a member of staff and can have some overnight stays. Many services now also offer at least one group discussion for fathers which is convened in the early morning or evening, to maximize the chance of participation. Some offer joint interviews with both partners to those who identify their relationship as problematic.

Philosophy of Treatment

Some services have a published theoretical approach to treatment, and in others this is emerging. At MPHMBU the philosophy of the unit is that mothers who seek care are usually distressed in response to difficult circumstances, rather than being intrinsically vulnerable. For example, it is our belief that mothering infants is skilled vital work which is of high social value, but is not dignified with the language or conditions of paid work and for which there is little training. Specific attention is paid to ensure that the language used by staff reflects this philosophy. Therefore, mothers are not asked *Do you work?* or *Are you going back to work?* Rather they are asked questions like *What is your work?* and when women reply that they are "just a mother" or "do not work," we take the opportunity to affirm the value of working as the mother of an infant. Gender stereotypes about exclusive maternal responsibility for the unpaid workload of infant care and household management are challenged and notions of the human rights of mothers and infants are introduced. Many women report that conflicting advice has been problematic in the early months of mothering. There is an active and frequently reviewed unit philosophy to ensure that women are not given conflicting advice, and that protocols and policies are described in unambiguous language. Handover at shift changes and the weekly multidisciplinary team meetings are used to review each mother–infant dyad's needs and to ensure that care during the subsequent shift and discharge recommendations are consistent. Ongoing treatment including antidepressant medication or referral to a psychiatrist or other specialist mental health professional is offered to women whose mood remains depressed at the end of the admission (Fisher, Feekery, & Rowe-Murray, 2002).

All the REPS have more requests for admission than can be met. These are managed through structured telephone triage systems. All report 100% occupancy rates and waiting lists for admission of up to 10 weeks. Barnett and Morgan (1996) argue that effective early parenting interventions have to take into specific account the needs of the infant, the mother and their relationship with each other.

EVIDENCE OF IMPACT OF RESIDENTIAL EARLY PARENTING PROGRAMS

There is a small body of research, including both qualitative and prospective cohort studies which has investigated the impact of admission on women's health and functioning, infant health and behavior and mother–infant relationship

Maternal Health, Qualitative Investigation

One qualitative investigation used focus group discussions with 28 mothers to explore the experiences of completing a five-night residential program in a public access Australian early parenting center (Hanna & Rolls, 2001). The authors concluded that the program had positive effects on maternal confidence and self-esteem.

Prospective Cohort Studies

Six prospective studies of consecutive cohorts of mother–infant dyads admitted to REPS have been published and assessed among other outcomes, changes in self-reported maternal mood, sense of maternal efficacy and psychological functioning (see Table 10.3). These services are not exactly comparable in that most (Karitane, Riverton, Torrens House, TCFHS, and the Queen Elizabeth Centre) are public sector services open to the whole community, while MPHMBU only provides services

Table 10.3
Prospective investigations of maternal psychological functioning following a residential early parenting program

Authors, date, setting	*Study sample*	*Intervention*	*Outcome measures*	*Findings*
Leeson et al. (1994) Torrens House, Adelaide, South Australia	Consecutive cohort of 20 mothers admitted with infants aged 8–12 months	Four-night structured residential psychoeducational program	Assessments of maternal mood using CES-D five nights prior to admission and at one and three months follow-up	Reduction in maternal CES-D^a scores > 16 from 70% to 10% one month postdischarge, maintained at three months ($p < 0.001$)
Armstrong et al. (2000) Riverton Centre, Brisbane, Queensland	Consecutive cohort of 51 mothers with infants aged on average 13 (4–28) weeks; 48 (94%) followed up	Four-night structured residential psychoeducational program	Assessment of maternal mood using EPDS^b at admission and three months follow up	Reduction in mean EPDS^b score from 16.5 to 7.2, proportion with EPDS scores > 12 reduced from 86.2% to 18.8% (all $p < 0.001$)
Fisher et al. (2003) Masada Private Hospital, Mother Baby Unit, Melbourne, Victoria	Consecutive cohort of 81 mothers with infants aged on average 23 (±14.4 weeks); 86% followed up at 16 weeks	Five-night structured residential psychoeducational program	Assessment of maternal mood with the EPDS and the Profile of Mood States; study-specific self-ratings at admission and one month after discharge	Reduction in mean EPDS scores from 12.3 to 6.6, proportion with EPDS scores > 12 reduced from 43% to 13% (all $p < 0.0001$); reduction in PoMS Tension-Anxiety ≥ 20: 26% to 3%; Fatigue-Inertia ≥ 13: 78% to 32%; insufficient sleep 78% to 11%; confident about infant care 28% to 46% (all changes $p < 0.001$)
Matthey and Speyer (2008) Karitane Residential Parentcraft Unit, Sydney, New South Wales	Consecutive cohort of 116 mothers with infants aged on average 39 (3–156) weeks; 87% followed up at 5 and 75%	Five-night structured residential psychoeducational program	Assessment of maternal mood with the EPDS and the HADS-A at 5 and 16 weeks after discharge	Reduction in mean EPDS scores from 10 to 6.8^b to 5.2; proportion with either EPDS scores > 10 or HADS-A^c > 8 reduced from 55% to 30%^{b} to 26% (all $^b p < 0.001$)

Treyvaud et al. (2009) Queen Elizabeth Centre, Melbourne, Victoria	44 volunteers who were admitted with their infants aged 13.6 (±9.3) months; 75% followed up at 4 weeks	Five-night structured residential psychoeducational program	Maternal mood assessed with DASS twice during admission and four weeks after discharge	Reduction in mean DASS[d] Depression scores from 8.0 to 3.9[b]; Anxiety scores 4.2 to 1.7[b] and Stress scores 14.4 to 6.7[b] (all [b]$p < 0.001$)
Rowe and Fisher (in press) Tweddle Child and Family Health Service, Melbourne, Victoria	Consecutive cohort of 79 mothers with infants aged on average 33 (±14.8 weeks); 84% followed up at 1 and 73% at 6 months	Three- or four-night structured residential psychoeducational program	Assessment of maternal mood with the EPDS and the Profile of Mood States; study-specific self-ratings at admission and one and six months after discharge	Reduction in mean EPDS scores from 11 to 6.8[b] to 6.3; proportion with EPDS scores > 12 reduced from 39% to 18%[b] to 12%[b]; reduction in PoMS[e] Tension-Anxiety ≥ 20: 20% to 8%[b] to 7%; Fatigue-Inertia ≥ 13: 69% to 43%[b] to 35%; insufficient sleep 80% to 14%[b] to 12%; confident about infant care 85% to 94%[b] to 96% (all changes [b]$p < 0.001$)

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[a] Centre for Epidemiological Studies Depression Scale (Radloff, 1977).

[b] Edinburgh Postnatal Depression Scale (Cox et al., 1987).

[c] Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983).

[d] Depression, Anxiety, and Stress Scale (Lovibond & Lovibond, 1995).

[e] Profile of Mood States (McNair et al., 1981).

to women with private health insurance or who can self-fund admission costs. Services vary in constitution of the staff, assessment and treatment of physical health problems and in permitting dedicated rest for women to recover from fatigue. Nevertheless, all programs encompass psychoeducational groups, individualized supported training in infant sleep and settling and a supportive social milieu.

Despite some program diversity all found substantial reductions in women's scores on self-reported measures of depressive and anxious symptoms. Of the four which assessed short-term outcomes, changes were apparent one month postdischarge, suggesting that mood improvement is rapid. Improvements remained at three and six month follow-up suggesting that the benefits are sustained. In addition maternal exhaustion and functional efficiency improved.

Satisfaction with care in these services is high. Six months after completing the MPHMBU program, overall evaluation was that 97% found it had been somewhat or very helpful and 100% that they had learnt about their baby's developmental needs and their infant care skills had improved. Most women (93%) thought their infants' needs had been addressed effectively and 88% that their own needs had been recognized and assisted (Fisher et al., 2003). Similarly at TCFHS all reported that overall they had received somewhat or very useful help, 99% that they had been educated, 98% that they had been supported and 97% that they were satisfied with personal involvement in individualized program planning. Evaluations of the particular elements of the program at this service are summarized in Table 10.4.

Table 10.4
Participant evaluations of components of the TCFHS program (percentages) (n = 66)

Aspect of program	*N/A*	*Not at all helpful*	*Somewhat helpful*	*Very helpful*
Support of nurses	—	2	11	88
Education sessions	—	9	57	34
Staff presence while learning to settle baby	—	3	34	63
Assessment of baby	—	5	28	67
Learning about other community services	21	34	37	8
Sharing experience with other mothers	—	1	24	75

Source: Fisher and Rowe (2004).

Some studies reported more detailed analyses of differences between the groups who recovered and did not recover and on women's own appraisals of what had been of assistance or not of assistance in undertaking the program. Fisher et al. (2004) found that women who had EPDS scores > 12 during admission and at either the one- or six-month follow-up were distinguishable from the rest of the cohort, whose scores were not in this clinical range at either follow-up point on three factors. They had either experienced violence from their intimate partner in the preceding 12 months or were frightened of him, their pregnancies had been unwanted and they had personality characteristics of being timid and lacking in assertiveness. Matthey and Speyer (2008) found that the group who reported that the presenting problems has not improved were more likely to have had "bonding difficulties" on admission as assessed by the author's Being a Mother and Bonding Scale than those who experienced beneficial change.

INFANT BEHAVIOR AND MANAGEABILITY OUTCOMES

The interventions in all these settings include parent training in sleep behavior management strategies. The six prospective studies all reported significant improvements in infant behavior including reduced overnight waking, less infant distress during settling to sleep and reduction in sleep associations, which were apparent by four weeks postadmission and sustained at least in the short term (see Table 10.5). Treyvaud, Rogers, Matthews, and Allen (2009) did not assess particular infant behaviors directly, but mothers reported that there were significant reductions in the frequency and severity of child sleeping and feeding difficulties between admission and follow-up. In the study in which daytime sleep reduced by six months postdischarge (Fisher et al., 2004) this is likely to be attributable to normal developmental changes as babies were by then aged 10–18 months. Importantly, total amount of crying and fussing reduced and total duration of being awake and content increased. This suggests that underslept infants are more distressed and irritable and that when adequate sleep is experienced infants are generally happier.

Mother–Infant Relationship

Mother–infant relationship was assessed through maternal self-reports of confidence in capacity to provide effective infant care. In all the studies which assessed it (Armstrong et al., 1998; Fisher et al., 2004; Matthey &

Table 10.5

Prospective investigations of infant behavior following a residential early parenting program

Authors, date, setting	*Study sample*	*Intervention*	*Outcome measures*	*Findings*
Leeson et al. (1994) Torrens House, Adelaide, South Australia.	Consecutive cohort of 20 mothers admitted with infants aged 8–12 months	Four-night structured residential psychoeducational program	Assessments of infant behavior using detailed diaries of infant behavior at one and three months	Reduction in number of overnight wakings, shorter time to settle ($p < 0.001$)
Armstrong et al. (2000) Riverton Centre, Brisbane, Queensland	Consecutive cohort of 51 infants aged on average 13 (4–28) weeks admitted with their mothers; 48 (94%) followed up	Four-night structured residential psychoeducational program	Maternal reports of infant irritability	73% of mothers reported that infant irritability was "significantly improved" three months postdischarge
Don et al. (2002) Tresillian Family Care Centre Residential Unit, Sydney, Australia	Consecutive cohort of 109 infants aged up to 20 weeks admitted with their mothers	Four-night structured residential psychoeducational program	24-hour infant behavior charts completed one week prior to admission, on day 4, and one month after discharge	Mean crying and fussing decreased and mean times awake and content, and asleep, increased ($p < 0.001$) by day 4 and continued to improve over the first month at home
Fisher et al. (2004) Masada Private Hospital, Mother Baby Unit, Melbourne, Victoria	Consecutive cohort of 59 infants aged 31 (±10) weeks admitted with their mothers	Five-night structured residential psychoeducational program	24-hour infant behavior charts; Short Temperament Scale for Infants; assessed at admission and one and six months after discharge	Total crying and fussing in 24 hours reduced from 151 to 73* to 71 minutes; waking > twice per night 64% to 29%* to 32%; less than 2 hours total daytime sleep 78% to 14%* to 42%* ($p < 0.001$)

Matthey and Speyer (2008) Karitane Residential Parentcraft Unit, Sydney, New South Wales	Consecutive cohort of 116 infants aged on average 39 (3–156) weeks admitted with their mothers; 87% (98) followed up at 5 and 75% (88) at 16 weeks	Five-night structured residential psychoeducational program	Maternal reports of infant sleep; mother–infant “bonding” on the Being a Mother and Bonding Scale	80% reported improvement in infant sleep; suboptimal bonding reduced from 22.4% to 12.3%* to 12.5% ($p < 0.01$)
Rowe and Fisher (in press) Tweddle Child and Family Health Service, Melbourne, Victoria	Consecutive cohort of 79 infants aged on average 33 (±14.8) weeks admitted with their mothers; 84% followed up at 1 and 73% at 6 months	Three- or four-night structured residential psychoeducational program	24-hour infant behavior charts; Short Temperament Scale for Infants; assessed at admission and one and six months after discharge	Total crying and fussing in 24 hours reduced from 163 to 73* to 60 minutes; waking > twice per night 76% to 45%* to 32%; less than 2 hours total daytime sleep 76% to 48%* to 32% (all $*p < 0.001$)

* = $p < .01$.

Speyer, 2008; Rowe & Fisher, 2010) average self-rated maternal confidence and proportion rating themselves as very confident in providing infant care increased between admission and follow-up. This was attributed to what they had learnt and to the benefits of high quality staff support provided by staff (Matthey & Speyer, 2008). Many women linked the growth of confidence to a deeper understanding of their infant's needs and greater capacity to provide well-informed contingent care which had led to more gratifying mother infant interactions. Only Treyvaud et al., (2009) used an external videotaped assessment of maternal parenting behaviors, the NCAST Parent–Child Interaction (PCI) Teaching Scale (NCAST AVENUEW). They found that both maternal contingency and scores increased significantly from the first to the last day of the five day admission.

Groups Who Are Insufficiently Assisted by Residential Early Parenting Programs

Few of these investigations described the characteristics or needs of women for whom REPS interventions were insufficient to meet their needs. However, Fisher et al. (2003) found that women who experienced their partners as emotionally responsive, trustworthy and affectionate had lower mood disturbance when admitted and recovered more rapidly. In contrast, those who were unable to trust and confide in their partners, or who experienced them as controlling, intimidating, unresponsive or frightening had higher psychological distress and were less likely to recover. Sustained distress was also associated with recalling her own mother as having been emotionally cold and unresponsive in childhood and providing insufficient support since the birth of the baby. Matthey and Speyer (2008) also found that the group least likely to find admission to Karitane effective was women with "bonding difficulties." Although it is often recognized during the admission that ongoing specialist care might be needed to assist with these established difficulties, uptake of these referrals appears to be quite low (Fisher et al., 2004).

In the absence of data about attachment style, we can only speculate on the meaning of these findings. It is probable that a short admission is of insufficient duration for women with disorganized attachment, who might have had repeated experiences of abusive or harmful relationships, to be able to form the trusting therapeutic alliance that is required to make this intervention effective. It is also likely that their complex and established difficulties require sustained and specifically informed treatment from highly specialized practitioners. Either sophisticated triage systems to direct them to more appropriate services or referral to these services in a stepped approach after completing the early parenting program are required.

One evaluation of a follow-up group for women who had completed a REPS program and had an EPDS score >12 on discharge has been reported (Morgan et al., 1997). An eight-week small group program involving professionally facilitated two-hour supportive sessions for women to discuss adjustment to motherhood, loss and heightened emotional and practical needs. Partners could participate in one session. Overall the proportion of participants who had EPDS scores >12 had decreased to 22% at eight weeks and none at six months and self-esteem had improved.

SUMMARY AND CONCLUSIONS

It is now well established that women's physical and mental health can be seriously compromised in the short and longer term after childbirth. Maternal mental health is governed by multiple protective and risk factors, which interact to increase or reduce the likelihood of mental health problems. A mother's caregiving sensitivity and responsiveness can be reduced when she is experiencing mental health problems. There is agreement in the international literature that because this constitutes a significant public health problem, the development of effective treatments is an international priority.

Treatment strategies are governed by conceptualization of the health condition and health service structure. These data suggest that a social model of postnatal mental health problems in which occupational fatigue associated with caring for an unsettled baby, limited knowledge about infant behavior and needs, or skills to address these in a social context in which there is insufficient support contributes to depressive and anxious states. Debate continues into whether services should be provided in primary care settings or specialist secondary or tertiary services. Australia's REPS centers offer a model of secondary care which appears to be promising.

While this body of evidence is quite limited the available data are nevertheless consistent in suggesting that the structured psychoeducational approach offered by REPS programs is a highly effective and rapid treatment for mild to moderate maternal depression and anxiety in women, leads to reductions in problematic infant behaviors and to enhanced maternal caregiving confidence. These changes appear to be sustained in most women who complete the programs at least in the medium term.

It is not possible to distinguish the elements of the REPS intervention that contribute to these apparent beneficial effects. However, factors which might be relevant include the highly structured psychoeducational programs which combine group learning and reflection opportunities with an individualized age-appropriate solution-focused set of activities to be completed by each mother with her baby. The promotion of cognitively focused rather than emotionally focused responses to unsettled infant behavior including prolonged crying and frequent overnight waking, coupled with supported exposure to the anxiety-arousing stimulus of putting the baby to bed while awake is also likely to be operating. The social milieu of undertaking the program with a small group of women and their infants in a similar predicament is valued and likely to be operating to reduce social isolation and assist women to realize the need to form new relationships appropriate to this life stage and situation. The explicit focus on naming and discussing the gender stereotypes that can be problematic as couples renegotiate their workloads and needs of each other after the birth of a baby, is probably not established in all services. Nevertheless at MPHMBU where there is an established practice of valuing the work of mothering, naming exhaustion as occupational fatigue, encouraging women to be assertive in recognizing their own rights and needs as well as those of their infants and partners, many women who complete the program describe these as providing crucial new concepts and language which is going to be of value after discharge from the program.

The generalization of this approach to other contexts, cultures and settings is yet to occur, and will require demonstration of economic as well as clinical benefits. Overall however, residential early parenting programs appear to be acceptable and effective in promoting infant mental health through rapid improvements in maternal functioning and knowledge of infants' developmental needs and behavior and associated improvements in caregiving capacity.

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